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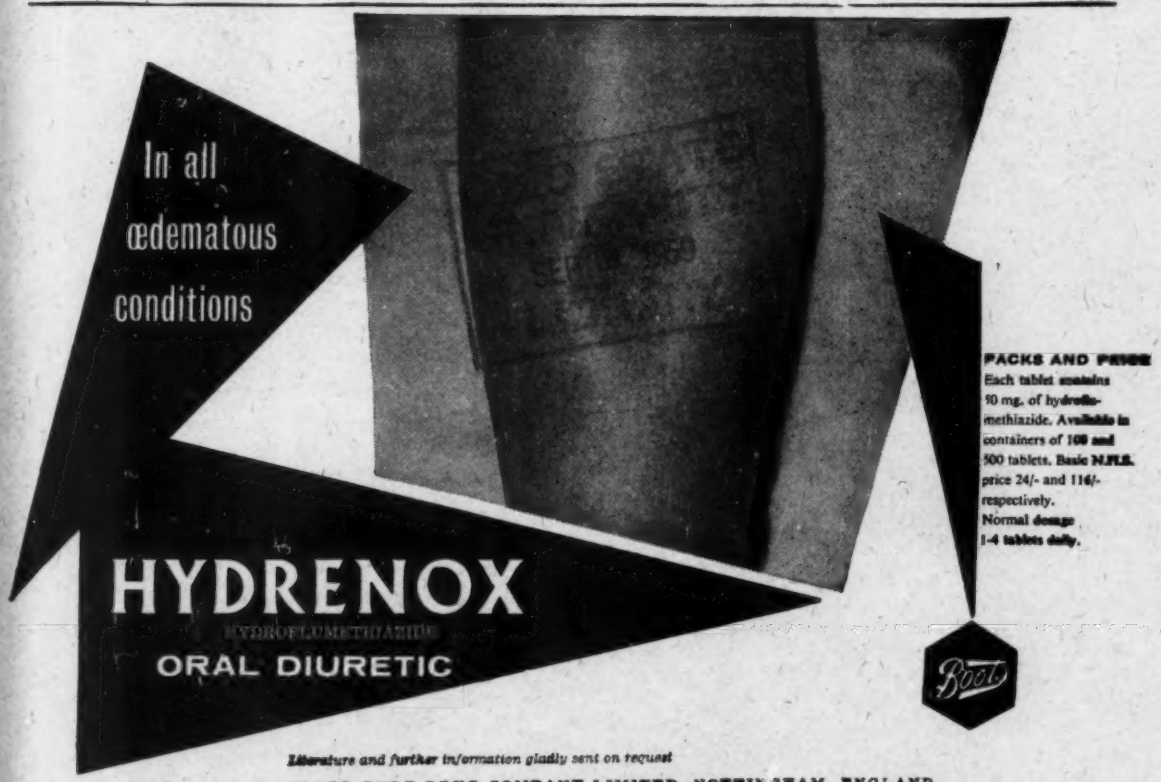
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BRITISH MEDICAL JOURNAL

LONDON SATURDAY AUGUST 8 1959

THE THREE REVOLUTIONS IN MEDICINE*

BY

SIR ARTHUR THOMSON, *M.C.*, M.D., F.R.C.P.

Professor of Therapeutics and Dean of the Medical School, University of Birmingham

When William Osler, Regius Professor of Medicine in the University of Oxford, gave the first of these annual lectures in 1908 he said that the invitation to him from the Master and Fellows of St. John's College manifested in the sons of the prophets the old courtesy of the fathers. That to-day they invite one whose working life has passed in a civic university founded but a few years ago shows that the old courtesy remains and is inspired by a generosity of which I am deeply conscious and appreciative.

The title of a lecture in commemoration of Thomas Linacre which includes the word revolution requires some explanation. No man was less revolutionary in spirit, and he loved the monastic peace of his study; as Fuller says, he was the restorer of learning in this country and sought to give back to medicine the uncorrupted spirit of Greece and to strip it of Arabian accretions. But, on the other hand, the Greek tradition was the child of the first major revolution in the history of medicine, and though the passage of wellnigh two thousand years had obliterated the memory of the completely different system which preceded it, Linacre in seeking to restore the Greek spirit was all unwittingly defending a revolution which had heralded a new epoch.

By precise definition an epoch is a point in time, a fixed date; in derivative use over three centuries the word has come to signify either the beginning of a new era or a period in history distinguished by the prevalence of a particular state of things or system of thought. In his studies of human history Professor Toynbee has drawn attention to something that was already widely known but worth emphasis—that epochs in the derivative sense of the term are rarely, if ever, to be defined accurately in terms of chronology. The old lives on in uneasy companionship with the new, and for many years there may be much confusion of thought, ideals, and practical activity. It is because I believe that we are ourselves passing through such a confused period that I have selected this subject for my address.

Knowledge of the past refines judgment of the present, and a man who knows something of the history of a rapidly developing subject such as medicine is more likely to distinguish the significant and enduring features of the contemporary scene than one who limits his studies to a synoptic review of that vast confusion known as current literature.

The Primitive Epoch

It is commonly assumed that theory and practice are interdependent; that what men do is determined by what they think and believe, and what they think and believe is in turn modified by the result of what they do. That assumption is dubious, for much human activity is still conditioned by primitive instinct, untouched by conscious thought or formal creed, and even at the highest intellectual level it is probable that subconscious, imaginative intuition plays a greater part than many are inclined to admit. It is strange, too, how slowly and, as it were, diffidently practice affects theory; how reluctant men are to question authority and belief long established by time, education, or custom.

However that may be, there is little doubt that the shape of primitive medicine was determined by theories adopted in explanation of facts of nature. Man believed that phenomena like thunder, lightning, drought, or flood were controlled by powerful beings other than himself, and his conception of the nature of these beings varied. Sometimes his conception was anthropomorphic; sometimes he thought of them as animals and established an elaborate system of totems. These conceptual images, whatever their form, were the earliest gods. Some were beneficent, but to account for catastrophe primitive man believed that many were malevolent devils. In such a theoretical system sickness, obviously, was a work of malevolence, and the relief of it was sought in two ways—either by placating the ill-disposed god with sacrifice or sacrificial offering or by frightening him away from his evil work by noise, by violence, or by the assumption of grotesque and terrifying disguise by the physician or the sufferer. But, as Sir James Frazer has shown, the theory of animism does not account for all the practices of primitive medicine, for "along with the view of the world as pervaded by spiritual forces savage man has a different and probably still older conception in which we may discern a germ of the modern notion of natural law or the view of nature as a series of events occurring in an invariable order without the intervention of a personal agency."

This conception is involved in sympatheic magic and includes two principles of thought—first, that like produces like, and, second, that things which have been in contact continue to act on each other at a distance and after the physical contact had been severed. The first principle—that like produces like—was probably suggested by the readily observed facts that children often resemble their parents and that different animal species do not interbreed; but the source of the second is more obscure. I hazard the conjecture that observations of cases of infectious disease may have promoted it. Imagine a savage stricken with dysentery or smallpox who is visited by a friend from a distance. Some days after the friendly visitor has returned to his home he is himself taken with the same symptoms of illness as appeared in the original victim, who may still,

*The Linacre Lecture delivered at St. John's College, Cambridge, on May 6, 1959.

indeed show them. To the savage with no conception of the bacterial world might it not seem that the sick men having been in contact were continuing to influence each other at a distance?

On such hypotheses was the primitive practice of medicine based, and faith in the efficacy of images, charms, and relics derives from them. If we add to the theories of animism and sympathetic magic the belief that the stars in their courses influence the fate of individual men (as they certainly determined the routine of their agriculture) we have the explanation of the extraordinary therapeutic practices which persisted in Europe down to the eighteenth century and later, and still hold sway in large areas of the world to-day.

The Greek Epoch

In the course of centuries the primitive system of medicine I have described gained an authority so absolute and hallowed that to question it was an act of infamy deserving instant and condign punishment at the hands of its established and orthodox practitioners.

The fetters of primitive beliefs were strong, and it is part of the glory of Athens that they were broken there. Our debt to the Hippocratic physicians is threefold. First, they rejected the welter of superstition inherent in animism, astrology, and sympathetic magic, and in its place established the concept of disease due to natural causes and as a manifestation of disturbance of the normal equilibrium between an organism and its environment.

As an example take the opening words of Hippocrates on "The Sacred Disease" (epilepsy). "It is not, in my opinion, any more divine or more sacred than other diseases, but has a natural cause, and its supposed divine origin is due to men's inexperience." And later the blunt statement, "Every disease has its own nature and arises from external causes, from cold, from the sun, and from changing winds."

His followers accepted the current scientific opinion of their time that there were four elements—air, water, earth, and fire—and matched them with four humours—yellow bile, phlegm, black bile, and blood. Healthy bodies contained proportions of all these, and when either the proportions were disturbed or one of the humours was altered, disease resulted.

The next achievement of the Hippocratic school was a sound method of clinical practice based on patient observation at the bedside and objective records of the course of individual cases.

The Greek physicians were much concerned with the crises of acute disease (which to them were an indication of the separation of noxious humours from the body) and particularly with prognosis. Their insistence on the importance of forecasting the outcome of a particular illness may justly be compared with the prestige that the power of prediction confers on many scientific activities to-day.

Greater than these achievements, however, was their definition of the proper role of a physician.

When first I heard them the words of the Hippocratic Oath seemed strange, fantastic, and even a little superfluous. "The regimen I adopt shall be for the benefit of the patients according to my ability and judgment and not for their hurt or any wrong. I will give no deadly drug to any . . . ," and so on. But in the older, magical system medicine was not practised exclusively in the interest of the sick. Deadly drugs or poisons, spells, and rituals paved the path to power and satisfied the lust of private enmity. The primitive medicine man might be priest and king, but he was often murderer as well as healer. The Hippocratic Oath marked a clean break with the past; the practice of medicine was to be a way to the good life and no longer the instrument of ambition. To effect the change took time; there persisted long after the Hippocratic revolution cults of medicine which did not shrink from the invocation of evil and the administration of poison for private gain. I remind you of the advice that Cato, the Censor, gave to his son about Greek physicians in Rome, "They have sworn to kill all the barbarous with their drugs, and they call us barbarians. I forbid physicians for you."

The Oath was not superfluous at that time, and in our own sad events during the last war led to a revision of it in modern terms.

Another remarkable instance of the survival of the primitive idea of the work of a physician is to be found in a book by John Keevil entitled *Hamey the Stranger*. At the end of the sixteenth century, Hamey as a young man from the University of Leyden was appointed private physician to the Tsar of Russia, and found to his distress that his royal master expected his doctor to poison ambitious nobles of the court whom he had cause to fear. When the Tsar himself was sick he deserted his physician and consulted the local sorcerers.

So great was the contribution from Athens, and later from Alexandria, that it seems a little ungenerous at this date to comment on aspects of Greek medicine which contributed to its partial eclipse in the centuries before the Renaissance. Nevertheless, it must be admitted that Greek physicians after Hippocrates tended to adopt sweeping generalizations with insufficient criticism of the evidence for their support. Galen, for instance, held that nature did naught in vain, and that he could detect Divine intention in every human organ—presumably a return to the principles of animism which had characterized the primitive system.

The Greeks also held "mechanical" labour and practical arts in some contempt, and this restricted their advance because anatomical dissection and the examination of diseased bodies after death were essential to progress, and both required considerable manual dexterity and physical exertion. Their point of view seems to have been derived from the argument that, although many things in the world appeared imperfect, it was impossible to believe that the gods would have created anything less than perfection, and therefore they must conclude that sensory perception was fallible (as indeed it often is) and not to be ranked as high as the mental activity of, for instance, pure mathematics.

Greek practice, too, was limited in its application. As Dr. Donald Hunter has pointed out in his *Diseases of Occupations*, no one can read the *Regimen* prescribed by Hippocrates for a healthy life without realizing that Greek physicians were almost exclusively concerned with a privileged class: that their advice about the proper balance of food and exercise had no relevance to the mass of the people. Running on the track, wrestling after being well oiled, walks in the sun after dinner, warm baths, sleep on soft beds, and drunkenness occasionally, but not to excess, are no doubt admirable prescriptions for a man of leisure, but they were hardly applicable to the many who earned scanty bread in the sweat of their brows. We must not blame the Greeks for failure

to test their hypotheses by experiment: that idea in its full development was to be the fruit of the scientific revolution that began in the sixteenth century of our era.

The Second Major Revolution

"Since a babe was born in a manger it may be doubted whether so great a thing has happened with so little stir." In that terse sentence A. N. Whitehead assessed accurately the impact of the scientific revolution which, as its influence spread, completely changed the character of the habitual thought of men. From the point of view medicine, 1543 (less than twenty years after Linacre's death) is the crucial date when Andreas Vesalius published his *De humani corporis fabrica* and restored accurate observation and description to a place of greater importance than that of commentaries on the writings of the Greek fathers. By strange coincidence *De revolutionibus orbium cælestium* by Copernicus was printed in the same year, but nearly a century was to pass before William Harvey published *De motu cordis* in 1628, and demonstrated for the first time that harmless experiments on men might be used successfully in the study of problems of physiological function and to test a hypothesis. The idea that accurate measurement and the experimental method of the physical sciences might be relevant to biology and medicine grew slowly. Lack of interest in it was due to several reasons. Biological problems are very complex, and particularly when they concern men.

In the more exact sciences, in chemistry and physics for example, observation, reflection, and experiment define a problem, and in a search for its solution the chemist or the physicist is completely free in the use of his material; the only limits are those imposed by the scope of his intelligence, the quality of his apparatus and assistance, and the limits of the established knowledge of his time. Modern experimental science has scored its greatest triumphs by the study of isolated systems in a controlled environment. Intuitive philosophers and artists, a decayed but deserving class, have indeed suggested that completely isolated systems are a fiction and that glimpses of reality derived from the study of them are likely to be misleading, but the hesitation of thinkers and the inspiration of artists gain little sympathy in the midst of material triumphs of the experimental method. In clinical medicine the material for study is a self-conscious human being; the isolation of a system is extremely difficult; indeed, we can never isolate the whole individual from his thoughts, his memories, his emotions, or his past, and the control of his environment will at best be partial. To these inherent difficulties must be added the inexorable claim of ethics that nothing may be done by way of experiment that could harm the subject of it; and physicians cannot often repeat experiments at will; frequently they must await the chance event of nature.

Human biology and medicine, therefore, had to wait on the progress of chemistry and physics, on the discovery of the true nature of combustion, on the invention of the microscope, and on the development of techniques in neurophysiology and psychology as well as in the physical sciences.

More important still, from the standpoint of medicine, the labour of research seemed at first to promise no dividend for the patient. Even Harvey, the supreme scientist in his approach to the study of the circulation, continued in his clinical practice, as Sir Charles Dodds has pointed out, to use totally unscientific methods quite uncritically and without question. Apart from opium, purgatives, and emetics, "none of the drugs at his disposal had any pharmacological or therapeutic activity." It is not surprising that Thomas Sydenham in this country had a large following in the seventeenth century when he pleaded for a reversion to the Hippocratic method of patient study at the bedside as the only reasonable preparation for the work of a physician.

Nevertheless, despite all discouraging circumstance, the idea of a rational scientific basis for medical practice was never wholly abandoned: the development of physiology in France at the end of the eighteenth century, cellular pathology in Germany in the nineteenth, with the introduction of methods of clinical examination by percussion and auscultation, did much to increase the physician's understanding of the phenomena of disease, but they added nothing to his ability to control it. In the preparation of a review of the influence of the General Medical Council on education I came across two interesting passages in *The Times* of 1856, when negotiations for the Medical Act of 1858 were proceeding. The first, from the issue of January 25, was generous. "Of the three learned professions the medical has attained the highest character for disinterestedness. Hard things are said of the cupidity of the clergy . . . still harder things are said of the lawyers who are supposed to eat the contested oyster while the plaintiff gets one shell and the defendant the other: but there is probably no class of the community generally so free from mercenary motives as the members of the medical and surgical professions." But on April 3 a sterner note was struck. "There is so much guesswork in the [medical] profession that the president of the College of Physicians is nearly on a level with the meanest herbalist," and "The result of the longest, most varied, and most profound medical experience is so often a discussion of the worthlessness of medicine."

In his Festival of Britain Lecture in 1951 Sir Henry Dale confirmed the opinion recorded in *The Times*, when he said that in the mid-nineteenth century "medicinal treatment, in fact, was hardly ever given then with any idea that it could suppress or remove the cause of disease." It was the "duty of the physician . . . to maintain the patient's strength . . . and leave nature with as free a hand as possible. . . . We cannot . . . ignore the wide opening which a medicinal treatment with no other objective than this offered to self delusion, oracular posturating, and benevolent humbug."

In the past sixty years the picture has changed. No one now questions the value of medical treatment, and it is important to remember that most of the improvement has been derived from cultivation of basic sciences rather than development of clinical methods.

Nevertheless there has emerged a new discipline of clinical science for which we in this country are much indebted to the late Sid Thomas Lewis. It is the culmination of the second major revolution in medicine, which began with Andreas Vesalius in 1543 and was continued by William Harvey in 1620. That revolution added a scientific basis to the clinical practice and ethical position of the Hippocratic physician.

The Third Revolution

Fifty years before the therapeutic harvest of the scientific method in medicine had begun, the seeds were sown of a third revolution, which is the source of much confusion to-day.

Early in the nineteenth century Jeremy Bentham

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conceived the idea that medicine had a duty to society as well as to individual patients, and that, in certain circumstances, this social duty should take precedence of personal professional responsibility; in other words, that doctors should be concerned more with the public health and less with the relief of individuals. His followers, Thomas Southwood Smith, Edwin Chadwick, and John Simon, were disturbed by epidemics in the congested towns that were a consequence of the Industrial Revolution. They believed, rightly, that if doctors were made legally responsible for the notification of cases of infectious or contagious disease to a local authority steps might be taken to limit their spread, and they made proposals to that end. To-day those proposals seem harmless enough, but they were not adopted without spirited opposition from those doctors who considered they infringed the passage in the Hippocratic Oath which required that whatsoever was seen or heard in the course of professional work should never be published abroad, and that notification might destroy mutual confidence and trust between a doctor and his patient.

As it is often believed to-day that by clinging to rules sanctioned only by long tradition doctors have been consistently hostile to changes in social policy, I take this opportunity to draw attention to some facts which deserve to be more widely known than they are.

In 1832 Charles Hastings, a kinsman of the great Governor General of India, founded the Provincial Medical and Surgical Association at a meeting of "50 respectable medical gentlemen" in the Royal Infirmary at Worcester "to promote the medical and allied sciences and to maintain the honour and interests of the medical profession." A year later the new Association sent a recommendation to the House of Commons Committee on Parochial Registers "that great benefit might be expected to accrue to medical science and consequently to the community at large if arrangements could be made for recording causes of death in the provincial registers of mortality." The Registration Act was passed in 1836. At the same time the Association was much occupied with the Poor Law Amendment Act of 1834, and in 1837 a highly critical report on it from a committee was published. In that year Charles Dickens was writing about Oliver Twist—that item of mortality who cried lustily at his birth, and would have cried the louder had he known that he was an orphan left to the tender mercies of churchwardens and overseers commissioned by the Act to make poverty as unpleasant as possible even for small children. Whether Dickens ever saw the Association's report I cannot say, but the similarity of the views expressed is remarkable.

In 1839 the Association spent £700, which it could ill afford, to encourage an investigation of "cowpox and vaccination," and an Act was passed in 1840 to provide vaccination for those who asked for it. Vaccination was not made compulsory in the United Kingdom until 1853, forty-six years after it was first established in Bavaria.

I have already referred to the controversy about the notification of infectious diseases: this was bitter and protracted, 'but there is no doubt that the patient work of the Association (which in 1852 became the B.M.A.) eventually made agreement possible about the Acts of 1889 and 1899.

The list of adventures in what is now called social medicine which were sponsored by the Association is a long one, and I can mention only a few. The school medical service, for instance, was foreshadowed in a committee report of 1888, and the virtual elimination of ophthalmia neonatorum came from a similar source in the early years of this century. The medical campaign against secret remedies began at the Annual Meeting of the Association in 1906. A nefarious vested interest had been created from human distress and credulity. Lists of unfortunate people, the victims of various diseases, were compiled and sold to enterprising scoundrels, who then circulated advertisements of their useless wares to the sufferers. Abortifacients were advertised in the press, and some newspapers charged exceptionally high rates for the notices as the traffic in them was so profitable. A prosecution in 1889 drew attention to a particularly vile aspect of the business. A firm engaged in it sent letters purporting to come from "a public official" to thousands of women who had bought their drugs. These unfortunates were threatened with proceedings for "the fearful crime of abortion" unless they paid two guineas to avert them. It is not surprising that the jury, in returning a verdict of guilty, added a rider that it was a vile plot made possible by the advertisements.

But of all the activities of doctors in the past one hundred and twenty years the one that would have interested Linacre most is the reform of medical education.

In retrospect it seems strange that he was so little stirred by the writings of his friend Sir Thomas More, who was not only Speaker of the House of Commons and Lord Chancellor but also a Commissioner of Sewers and of Plague Control. More, truly, was the Chadwick of the sixteenth century. In the *Utopia*, published in 1516, he makes a complete blueprint for public health legislation of the future; a city well built, with gardens and open spaces, a public water supply and drainage, cleansed streets, public abattoirs without the walls, hospitals of the sort we call general, and special institutions for the isolation of infectious disease. He even discusses the problem of eugenic human mating and the supply of maternity nurses. To all this Linacre seemed oblivious when in 1518 he founded the College of Physicians to regulate the practice of physic in London and for seven miles around.

Four years later the powers of the College were extended to cover the whole of England, and only graduates of Oxford and Cambridge and those who obtained the Lambeth degree from the Archbishop of Canterbury could practise as physicians without its licence. Nearly a hundred years earlier, in 1421, the Universities of Oxford and Cambridge had supported a measure to exclude from practice everyone who had not obtained the degree of bachelor of medicine, but it is doubtful whether it ever achieved the force of law, and certainly it had no significant effect. The first English law on the subject was in the Act of 1511, which seems to have been replaced by the Charter granted by Henry VIII to the College of Physicians in 1522.

In founding the College, Linacre was no doubt influenced by his experience during the seven years he passed in Italy, where the regulation of medical practice in Europe had developed and he had seen its advantages. The Harveian Librarian of the Royal College of Physicians (Sir Charles Dodds), to whom I am indebted for the information, has pointed out that the first known

legal enactment for the regulation of medical practice in Europe was promulgated in 1140 by Roger II, King of Sicily. It required those wishing to practise to be examined by "our officials and judges." Two hundred years later the examination was transferred to the Masters of Salerno. There were many Arabs at the court of that remarkable Norman, Roger II, and it is conceivable that his measures to control medical practice were a reflection of Eastern customs. It is possible, therefore, that by founding a College to regulate the practice of physic Linacre may all unwittingly have introduced one of those Arabian accretions to which he was in general opposed.

Despite the efforts of Linacre's College and of many other "licensing bodies" which in the course of time acquired the right to confer professional titles, the state of medical education in this country at the dawn of the nineteenth century was deplorable, and the conflicting interests of various authorities hindered reform. In 1813 a Bill introduced to the House of Commons to put down empirical practice or quackery failed to gain support, and in 1834 a parliamentary committee appointed to inquire into the state of the medical profession revealed a situation which was truly shocking. Their report would probably have shared the humble obscurity which in England is the common fate of such labours, had not the doctors themselves, in the shape of the Provincial Medical Association, given unremittent support to their recommendations until the General Medical Council was established in 1858. One of the many Bills presented to the House of Commons was actually drafted by George Hastings, the son of the founder of the Association and a Member of Parliament, in 1852.

My purpose in this summary and incomplete review of old forgotten far-off things is to show that in the nineteenth century doctors, far from opposing change, were leaders in liberal reform. I doubt if they were inspired by political principles: to me it seems more probable that their reactions were instinctively those of ordinary decent men whose work brought them in close contact with the misery of the poor and unprivileged

How, then, has it come about that ever since Mr. Lloyd George introduced the National Insurance Bill in 1911 the doctors have appeared to the public to be consistently hostile to measures of social reform?

In the first place it should be made clear that a dispassionate review of events in the past fifty years shows that there has been no dispute about matters of fundamental importance. Doctors have accepted readily enough most of the implications of a Welfare State.

As early as 1905 they published a report on contract practice, and recognized that in many places it was necessary. Six years later they issued another on "The Organization of Medical Attendance on the Provident or Insurance System," and acknowledged that public opinion demanded "that adequate medical attendance shall be placed within the reach of all members of the community." Soon afterwards Mr. Lloyd George introduced his National Insurance Bill. Trouble ensued because in its original form the Bill entrusted day-by-day administration to the same approved societies which had organized much of the contract practice that had proved unsatisfactory in the past, and because no income limit was fixed for those who wished to join the insurance scheme. There were also difficulties about remuneration. Amendments in the Bill which in the light of subsequent events must be considered reasonable failed to satisfy a number of doctors, and for a few years considerable ill feeling persisted, but gradually the insurance system won general support. Its defects were that no provision had been made for hospital treatment, and that the families and dependants of insured persons were excluded from benefit.

The Ministry of Health was established in 1919, and a consultative committee headed by Lord Dawson made proposals for "the future provision of medical and allied services" in the following year. In 1930 the British Medical Association issued a "Report on a General Medical Service for the Nation," and during the war its Planning Commission took the matter further. The recommendations of this Commission were largely adopted by Lord Beveridge in his final report, which shaped the National Health Service as we know it to-day. Controversy was most acute about the abolition of the right to buy and sell practices, the fear that a whole-time salaried service might be instituted, and the regulations for discipline and for the better distribution of doctors among the population.

Through the whole of this perplexing period doctors have been in a very curious and difficult position. Their work and their intimate knowledge of the condition of the people had convinced most of them that medical reform was both desirable and inevitable, and their reports indeed admitted it. The best of them however, are anxious lest reform should take such a shape that they will forfeit their independence and that the ideals of medicine will be lost. Some, it is true seem to be concerned principally about remuneration, but during the past two years I have had an unusual opportunity to observe them, and I am confident that most doctors are more disturbed about the fate of their profession at the nature of their work than they are about their pay. No one who has any knowledge of what happened to German medical practice under the tyranny of Hitler would wish social medicine to become an instrument of policy and no more.

Some reconciliation there must be: the mere cost of the National Health Service shows that. Social policy must influence practice, but it must never dominate it and exclude that intimate relationship between a doctor and his patients which is essential to all good clinical work.

Summary

What I have attempted in this lecture is a sketch of the three major revolutions of thought which have influenced the shape of medicine in its evolution from the primitive system. The third revolution is now in progress: it involves the precise relation of medical practice to society, and it is the task of this generation to find the solution of the problems that it raises. As the years pass some of the defects of the present National Health Service have become apparent: the division of responsibility between three types of authority; the virtual exclusion of the general practitioner from all hope of promotion to the rank of consultant in the hospital service; the difficulties in changing from one place of practice or one type of work to another, are obvious defects, and there are others. Despite all the failings and the controversy, however, it is doubtful whether any political measure has ever brought so much relief and help to those who needed it as the Act which came into operation in July, 1948.

INFLUENZA, 1959

THE STORY OF AN EPIDEMIC

BY

JOHN FRY, M.D., F.R.C.S.

General Practitioner, Beckenham, Kent

Unexpected and unwelcome a violent influenza epidemic hit my general practice in January, 1959, and went on until the last weeks of March. It produced the usual hectic strain on doctors and caused a great deal of serious illness in the community at risk. Since it is only in the field of general practice that influenza is seen in its true natural state, it is of some interest and importance to describe such epidemics so that each might be compared with its predecessors and an overall picture be built up over the years.

Influenza is a most important illness to our community. Its highly infectious nature leads to an enormous incidence, and it is not unusual to have more than 10% of the population of the country sick with influenza at any one time, and during the whole epidemic over 50% of those at risk in some areas may be affected. The loss of work-time is collosal. *The Times* of February 26, 1959, estimated that the 1957 Asian influenza cost the nation almost £100 million. As will be seen, the 1959 epidemic, in this practice, was as extensive as that of 1957. In addition to the large numbers affected, the complications account for much serious illness and for many deaths. Some 5,000 persons died in the 1957 epidemic in Great Britain, and this was very much less than in the epidemic of 1919.

In spite of its frequency, its importance, and the vast amount of research undertaken there is still a lot to be learnt, and a need to add more and new facts. The general practitioner is in a position to contribute clinical and epidemiological data. This paper from a south-east London surburban general practice aims to relate the incidence of the epidemic, the clinical features, and the complications and their management, and as a result of these findings some suggestions are made for the future.

The patients of the practice belong chiefly to social groups 2, 3, and 4. The numbers at risk in January, 1959, are shown in Table I.

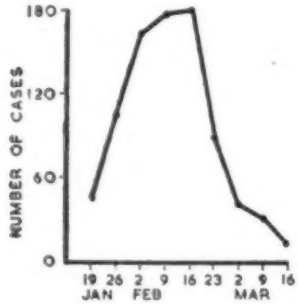
TABLE I.—*The Population at Risk*

Age	0-	5-	10-	20-	30-	50-	60-	70+	Total
Nos. ..	360	482	750	784	946 872	844	546	432	6,016

The Epidemic

The uniformity of the clinical features—namely, sudden onset, high fever, aches and pains, and respiratory symptoms—rendered the clinical diagnosis easy, and the fact that almost all (95%) of the serological tests for influenza were positive makes it certain that we were dealing with a true influenza epidemic.

The first cases were seen in the week of January 19, and the subsequent time sequence is shown in the Graph. The total of 849 cases actually seen by no means represents the true extent of the epidemic. It is estimated that probably a further 400 cases occurred in this practice but for various reasons did not require medical attention. Around 20% of the practice must have been clinically affected during the epidemic. This compares with a similar estimate of 25% for the Asian influenza outbreak of 1957 (Fry, 1958). In view of the close proximity in time of the two epidemics it is of the greatest interest and significance to note that only 34 (4%) of the 849 seen in the 1959 epidemic had suffered



from influenza in 1957. The majority of the influenza victims of the latter year seen to have escaped infection in 1959, presumably by virtue of a persisting state of immunity.

Age Liability.—The highest rates of incidence were in children and young adults, as shown in Table II. Why there should be this high prevalence in children

TABLE II.—*Age Distribution of Influenza in* 1959

Age:	0-	5-	10-	15-	20-	30-	40-	50-	60-	70+	Total
No. of cases	74	124	91	49	111	132	103	105	41	19	849
% of those at risk	21	26	20	17	14	14	11	11	8	4	14

and young adults, a prevalence that is a feature of many influenza epidemics, can only be an inspired guess, but very likely it is due to the increased opportunities for cross-infections at school. The opposite reasons—the fact that they mix little with outsiders—may explain the relatively low prevalence in the elderly.

Clinical Features

The clinical features of the illness during the epidemic were those common to most influenza epidemics. The *onset* was dramatically sudden, the patients often being able to recall the time almost to the minute. The *initial symptoms* were shivering, a sensation of being chilled, headache, backache, pains in the arms and legs. *Later*, in a few hours, there developed symptoms referable to irritation of the respiratory tract, with nasal obstruction, rawness of the throat and chest, and an irritating cough predominating. The patients felt extremely ill, with marked depression and feelings of impending doom.

Examination revealed a prostrate patient who was flushed, hot, and clammy, and who looked very sorry for himself. In the uncomplicated case, apart from the fever, red eyes, and congested respiratory mucosae, there were no abnormal physical signs.

On an average the acute stage persisted for three to five days, only to be followed by intense weakness and depression. On getting up from bed every step seemed an effort, and even minimal exertions were accompanied by unusual dyspnoea. It was often two, three, or even four weeks before the patients felt, and looked, normal.

Contrary to the optimism of the national press there was, and there never has been, a "three-day" influenza. A respiratory illness that is over in a few days is certainly not true influenza.

Treatment was simple and non-specific. Hot drinks, analgesics, and linctus were the usual remedies advocated. Prophylactic antibiotics were not used.

Investigations, obviously, could not be carried out on more than a small selected minority of patients. Confirmation of a recent infection by the influenza virus was obtained from paired serological studies, and of 20 selected patients who were believed, clinically, to have had influenza, positive results were obtained in 19. Two of these patients who suffered from proved influeza A in 1957 had evidence of recent infection by influenza B in the 1959 epidemic. Of the 19 positive results, 5 suggested infection by influenza B and 14 by influenza A. In this practice, therefore, one was dealing with a mixed epidemic of A and B viruses, with the former predominating. There was absolutely no clinical correlation between these serological findings. The patients with evidence of influenza B infection were just as ill as those with influenza A.

It is by the frequency and the severity of its complications that the effects of an influenza epidemic are usually measured. Uncomplicated influenza is an annoying, time-consuming, but benign illness. Complicated influenza is a potentially mortal illness, with possible permanent after-effects.

Three deaths in this practice could be attributed to influenza. All were in men over the age of 70 who were chronic bronchitics. They all died from cardio-respiratory failure. In the 1957 epidemic there were no deaths.

Except for very rare neurological lesions it is in the respiratory tract that most complications of influenza occur. This was so in the 1959 epidemic. In 80 patients there were chest complications, and in 6 acute otitis media complicated the course of the illness. It is the former that are of the greatest importance.

Chest Complications

The number of chest complications in the present epidemic was numerically greater than in any previous epidemic, and the patients so affected were much more severely ill. As might be expected, the treatment of these cases imposed a very great strain on the practice. It is important to mention that only one patient required admission to hospital; he was a man of 49 who developed an acute cor pulmonale on the fifth day of a pneumonic illness. The remaining 79 chest complications were managed in the practice along the normal lines.

The diagnosis of a complicating chest infection in general practice is a clinical matter. The family doctor must rely on his clinical faculties to pick out the pneumonia and the bronchitis associated with influenza. Pathological and radiological investigations will serve to confirm the clinical diagnosis, but in general practice they must play a secondary part. How does the family doctor diagnose a chest complication? As a rule he will base his diagnosis on a general ascertainment of the severity of the illness and the rate of progress and on local abnormal physical signs in the chest. The patient with a chest complication will be more severely ill than the average case of influenza. He will look ill when the doctor first sets his eyes on him, perhaps with dyspnoea and cyanosis. Instead of the condition beginning to settle after three to four days, fever will persist, cough will become more troublesome and there may be pain in the chest. Examination of the chest will often reveal abnormal physical signs, either locally or diffusely. It was on these broad but basic facts that chest complications were diagnosed in the practice in this epidemic.

Two clinical groups were recognized. The *pneumonias* were of two types—lobar pneumonia with clinical signs of consolidation in one or more lobes, and segmental pneumonia where the physical signs consisted of a localized area of moist sounds, usually at one or other base. *Acute bronchitis* was diagnosed when diffuse and bilateral rhonchi and/or rales were present over both sides of the chest. The incidence and distribution of these complications are shown in Table III.

TABLE III.—*Distribution of Chest Complications*

Age:	0–	5–	10–	20–	30–	40–	50–	60–	70+	Total
Lobar pneumonia ..	—	—	—	—	1	1	1	3	1	7
Segmental pneumonia	3	9	6	3	2	3	5	6	6	43
Acute bronchitis ..	6	1	—	1	2	3	4	6	7	30
Total ..	9	10	6	4	5	7	10	15	14	80
% of all cases of 'flu ..	12	8	4	4	4	7	10	36	73	9·5

The high incidence of segmental pneumonia is noteworthy, for this is the most frequent clinical type of pneumonia in general practice. The fact that seven cases of lobar pneumonia occurred is a very significant criterion of the severity of the epidemic. As a general rule, in a non-epidemic year it is rare to see more than one or two such cases annually. Another interesting clinical fact is that of these 80 patients with chest complications, only 6 were chronic bronchitics or patients especially liable to winter chest infections. Most of these complications occurred in patients who had never previously suffered from serious respiratory illness.

The age distribution of these complications shows, as one might expect, the highest rates in the young and the old. One-third of those in their seventh decade who contracted influenza developed chest complications, as did three-quarters of those aged 70 and over, whereas in young adults the risks of complications were less than one in twenty.

The clinical findings were, as a rule, confirmed radiologically. The usual changes were patches of consolidation at the bases, which in some patients took many weeks to resolve completely.

Sputum examinations did not reveal any predominant organisms. No staphylococci were detected. In 4 cases pneumococci were present in 2 *Haemophilus influenzae*, and in no fewer than 13 no pathogenic organisms were found at all.

As an accompaniment to the serological tests haemoglobin estimations and erythrocyte sedimentation rates were carried out. In over half of those specimens examined there was evidence of anaemia, and a sedimentation rate of over 40 mm. in the hour was by no means unusual.

The *treatment* of these chest complications depended on the severity of the illness. There were 24 patients

who were regarded as only mildly ill, and these were treated with simple non-specific measures and without antibiotics. The 41 patients who were moderately ill were given daily intramuscular injections of 2 mega units of crystalline penicillin. Those who were regarded as most severely ill were treated with penicillin, as above, in the first instance, but it was found necessary to use broad-spectrum antibiotics in addition.

A distressing feature was the very slow response to antibiotics of the patients with severe chest infections. Past experience had suggested that within 48 hours of specific therapy an obvious clinical improvement would be apparent. In these patients this was not the case. It was often four or five days before improvement occurred, and in many cases it was three, four, or even six weeks before there was complete resolution of the physical signs in the chest.

Comparison With Previous Epidemics

Each epidemic has its own characteristics, with varying rates of spread in the community of affecting the various age groups with different rates of complications. To a previous report on the age distribution of four influenza epidemics that occurred in this practice from 1950 till 1957 (Fry, 1958) can now be added the findings of the 1959 epidemic.

TABLE IV.—*Age Incidence of Influenza Epidemics* 1950–9 *in Percentages of Those at Risk Who Were Affected*

Year and Type	Age									Total	Total No.
	0–	5–	10–	20–	30–	40–	50–	60–	70+		
1950–1 (A)	1	2	4	6	8	4	10	5	4	6	223
1953 (A)	1	2	4	10	3	4	3	4	4	4	264
1955 (B)	4	7	3	3	3	3	3	3	3	3	150
1957 (A)	21	30	36	18	13	12	10	9	4	17	930
1959 (A and B)	21	26	18	14	14	11	11	8	4	14	849

From Table IV, it can be seen that the epidemics of 1957 and 1959 were much more widespread than the others. They also show a somewhat different age distribution, the brunt of the epidemic apparently falling upon the younger members of the community so far as the incidence is concerned. When the more important question of complications is considered we find somewhat different rates (Table V).

Although the proportion of complications was lowest in the 1957 and 1959 epidemics, the numbers of complications and deaths were much greater because

TABLE V.—*Incidence of Chest Complications During Influenza Epidemics* 1950–9, *Expressed in Percentages of Number of Cases of Influenza*

Complication	Year and Type				
	1950–1 (A)	1953 (A)	1955 (B)	1957 (A)	1959 (A and B)
Pneumonia ..	17	7	7	2	6
Acute bronchitis	3	5	3	1	4
Total ..	20	12	10	3	10

the number of cases had so greatly increased. It is of interest to note that the lowest rate, in 1957, occurred in the only epidemic that took place outside the winter months. It would seem that the inclement wintry weather has a very marked bearing on the rates of chest complications.

Discussion

As a rule epidemics of influenza appear suddenly, and over a matter of a couple of months sweep through countries all over the world. Why and where they start are mysteries. Whom the disease affects and what are the rates of complications in the community as a whole are questions difficult to answer when applied to the community as a whole. The answers, however, are of importance if we are to be able to prevent spread and protect susceptible individuals.

The collection of such detailed facts on a nation-wide scale is extremely difficult. It is possible to collect facts on the cause of deaths, on the reasons for admission to hospital, and on the rates of absence from work and school, but the possession of such information cannot give us a total overall pattern in the community. It is the family doctor, living and working in a well-known population, who is best placed to supply these missing facts. He knows how many of his patients go down with influenza, how many are unfit for work, how many suffer complications, how many require admission to hospital, and how many die. Collection of such facts will not be an undue or an impossible strain on a general practice if methods of recording are simple and well planned. In view of the fact that such information is necessary on a large scale and bearing in mind the great success of the combined morbidity survey by the College of General Practitioners and the General Registrar Office (1958), these two bodies should seriously consider the possibility of planning now for a prospective study in any forthcoming epidemics, so as to find answers to the above and other questions.

This paper represents the experiences of one general practice, but it may be considered representative of the country as a whole, and it might also have served the purposes of a pilot study for a bigger and more ambitious investigation in the future.

The 1959 epidemic, apparently caused by both A and B influenza viruses, was very widespread, and if the figures of this practice are in any way representative there must have been some 7 to 10 million cases of influenza in Great Britain, with nearly 1 million chest complications and some 5,000 deaths, chiefly in old people. The relatively high incidence in young children and adolescents raises the questions of whether they are particularly liable to influenza, whether they have more opportunities for cross-infection, or whether they merely seek medical advice more readily than the other age groups. It is a fact that in all epidemics of influenza it is in the aged that the highest complication rates and most deaths occur. This was so in the 1959 epidemic. No less than three-quarters of those over the age of 70 with influenza had chest complications, and the three deaths occurred in elderly patients. The high number of complications quoted in influenza epidemics that occur in the winter months, as compared with the lower rate in the epidemic in the milder autumn months, poses the question whether it is the inclement season or the extra virulence of the viruses that is the cause.

Consideration of these facts brings us to the more practical and more immediate problems of preventing the illness and of providing prophylactic measures for susceptible groups of the community. Sooner or later an efficient and a reliable vaccine will be evolved, and this will raise enormouse practical problems of immunizing the population. It was difficult enough to carry out the poliomyelitis immunization programme, which involved children only, it would be much more difficult to cover the aged and adults in an anti-influenza programme, especially if it had to be repeated at

frequent intervals. The results quoted above do suggest that it may be desirable to treat all those over the age of 70 with prophylactic antibiotics.

Summary

The family doctor is in an excellent position to study the natural patterns of an influenza epidemic. This paper reports the effects of influenza epidemic of January to March, 1959, on a south-east London general practice.

Over a period of nine weeks (849 (14%) patients in this practice were seen, and were diagnosed as suffering from influenza. It is estimated that of those who treated themselves are included the total incidence in the practice was around 20%.

The liability to infection seemed to vary with age. The highest rates were noted in school children and adolescents, and the lowest rates in the elderly.

The clinical features were those common in other epidemics. Investigations showed that the epidemic was a mixture of influenza viruses A and B.

Chest complications occurred in 80 patients (9.5% of all cases of influenza). Most of these complications were pneumonias (50), and many patients were severely ill and responded only slowly to powerful antibiotics. These complications were highest in those aged 70 and over (73% of cases) and in those aged 60–69 (36%), and lowest in those aged 10–39 (4%).

Compared with previous epidemics, the age patterns in the 1959 epidemic were very similar to the Asian influenza outbreak of 1957. The rates of complications were similar to other winter epidemics of influenza. The autumn Asian influenza had a much lower rate of complications.

If these figures are representative of the country as a whole then it is estimated that there were 7–10 million case of influenza almost 1 million chest complications, and some 5,000 deaths.

Future planning in this field should include a nation-wide study of the effects of influenza in general practice, the possibility of an efficient vaccine, and the advisability of using prophylactic antibiotics in the elderly.

It is a pleasure to thank Dr. G. E. H. Callebaut and Miss E. B. Blake for co-operation in coping with the work of this epidemic.

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The new edition of the *Clean Air Year Book*, 1959, published by the National Society for Clean Air, Palace Chambers, Bridge Street, London, S.W.1 (68 pages, 2s. net, 2s. 4d. by post), is an informative and useful guide to the new Clean Air Act and the Orders and Regulations made under it. Many other aspects of the work being done for the prevention of air pollution are the subject of the articles, and a new feature is a list of local authorities with smokeless zones or smoke control areas. Concise information is given about the work and services of the Society, and of other bodies dealing with the problem, together with a guide to the literature on the subject, a slected list of recent papers and articles, and a catalogue of films and filmstrips on air pollution, fuel efficiency, etc. Many readers will find helpful a synopsis of the case for clean air, for the guidance of speakers and writers, which is supplemented by a brief history of air pollution in Great Britain—from 1273 to 1958.

SICKLE-CELL/HAEMOGLOBIN-J DISEASE

BY

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Haemoglobin J was first described in an American negro by Thorup *et al.* (1956). Since that time reports of the presence of this haemoglobin have come from various parts of the world—Indonesia (Huisman *et al.*, 1957; Lie-Injo Luan Eng, 1958), Algeria (Cabannes *et al.*, 1958), India (Raper, 1957; Sanghvi *et al.*, 1958), Singapore (Ager *et al.*, 1958), French Canada (McCabe *et al.*, 1957).

Most examples of this haemoglobin that have been reported hitherto have been found in association with haemoglobin A. However, in one of the cases reported by Sanghvi *et al.* (1958) the haemoglobin J trait was present together with thalassaemia minor, although there was no evidence of interaction between them. Cabannes *et al.* (1958) mention three instances of association between haemoglobin D and haemoglobin J. The purpose of this communication is to report the presence of haemoglobin J in association with haemoglobin S.

Case Report

A 42-year-old man of fair complexion had been perfectly well until 1950, when he attended hospital for indigestion. In 1953 a duodenal ulcer was diagnosed, which did not respond well to two years of medical treatment. In 1955 a partial gastrectomy was performed, after which he remained well for three years. In April, 1958, he was admitted to another hospital with jaundice, and Weil's disease was diagnosed. In view of the finding of a positive sickling test and a rather abnormal blood film his blood was sent to us for further investigation to exclude sickle-cell anaemia. We could confirm the positive sickling test; the type of sickling was intermediate between holly leaf and filamentous.

Other results were as follows: haemoglobin, 11.7 g. per 100 ml.; foetal Hb, 0.5%; R.B.C., 4,400,000 per c.mm.; P.C.V., 40%; M.C.V., 90 cubic microns; M.C.H.C., 29%; reticulocytes, 4%. The osmotic fragility of the red cells was slightly decreased. The blood film showed numerous target cells (Fig. 1). On electrophoresis of haemoglobin a

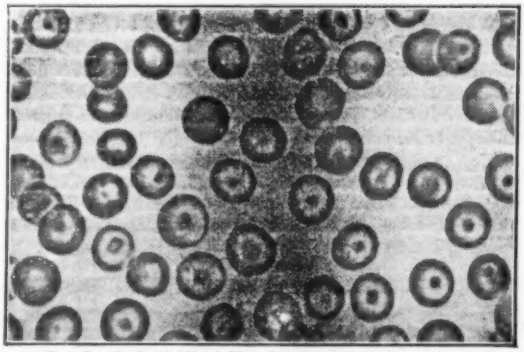

FIG. 1.—Stained blood film showing numerous target cells.

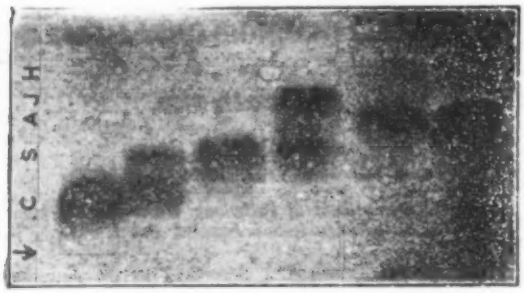

FIG. 2.—Electrophoretic patterns (on starch gel), reading from left to right: CC, CS, SS, SJ (patient), AH, AA. Application at arrow.

fast component in addition to haemoglobin S was found. The mobility of the component at *p*H 8.6 was about half way between A and H (Fig. 2). Blood samples were sent for reference purposes to Dr. Lehmann, of London, and to Mr. Robinson, of Detroit. They both reported that the fast-moving component was identical with haemoglobin J. Scanning showed that the composition of the patient's haemoglobin was about 40% S and 60% J.

Discussion

The episodes of jaundices was not thought to be a sickle-cell crisis clinically, and this view would seem to be justified. In fact, the patient suffers no disability attributable to his blood condition. He has a mild but well-compensated haemolytic anaemia, which is similar to some of our cases of sickle-cell/haemoglobin-C disease. In a series of 45 cases (MacIver and Went, 1958) of this latter condition a number were without any symptoms.

Investigation of the patient's family was interesting but disappointing. Both parents were stated to be dead, and the patient has no children and no full brothers or sisters. However, his mother, who was of negro stock, had six children by two other fathers, one of whom was Chinese. Both children by the latter and two of the other three children had the sickle-cell trait. The remaining child showed normal haemoglobin A only. It is justifiable to deduce from these findings that the mother carried an S gene. The father must therefore have contributed the J gene.

The patient stated that his mother "got him in Panama," and that his father was an American resident there. The predominantly Caucasian appearance of the patient, taking into account the negro mother, tends to support this possibility. To trace the father or his relatives would seem to be hopeless.

Summary

A case of sickle-cell/haemoglobin-J disease is reported. The interaction between the genes for haemoglobin S and J is not marked, resulting in a mild well-compensated haemolytic anaemia. Family studies suggest that the haemoglobin J was contributed by a Caucasian from North America.

We are grateful to Dr. E. S. Shoucair for referring the case to us, and to Drs. H. Lehmann, J. V. Neel, and A. R. Robinson for their kindness in comparing the characteristics of the fast haemoglobin in this case with other examples in their possession.

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ACETAZOLAMIDE IN SICKLE-CELL ANAEMIA

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In 1957 Hilkovitz recommended acetazolamide ("diamox") for the treatment of patients with sickle-cell anaemia. Since then little has been reported on experiences with this drug in sickle-cell anaemia, although unpublished observations were said to be disappointing. However, there is at least one communication, by Charmot and Reynaud (1958), who found that sickle-cell crises were relieved by acetazolamide. The drug is a carbonanhydrase inhibitor and, quite apart from any effect on the sickle cells, it would be expected to cause a metabolic acidosis. It is also known to produce a fall in serum potassium. Greenberg and Kass (1958) have laid emphasis on the importance of the blood *p*H in the causation or prevention of sickle-cell crises, and they produced crises by treating patients with ammonium chloride and acetazolamide, but not with acetazolamide alone. Tenney and Tschetter (1959) found that the metabolic acidosis caused by acetazolamide in rats was accompanied by a fall in oxygen consumption. It occurred to us that sickle-cell anaemia patients might have failed to respond to treatment with acetazolamide because of the associated acidosis.

Present Investigation

We decided to treat (at the General Hospital, Lagos, Nigeria) patients for two weeks with acetazolamide and, at the same time, to give them large amounts of sodium bicarbonate and potassium chloride to counteract the metabolic acidosis and hypokalaemia associated with prolonged acetazolamide therapy.

Table I summarizes the ages of the patients, their

TABLE I.—*Patients Treated with Acetazolamide*

Case No.	Age in Years	Weight (kg.)	Acetazolamide (mg./kg. Day)	Daily Supplement (g.)			
				$NaHCO_3$		KCl	
				1st Week	2nd Week	1st Week	2nd Week
1	7/12	7·7	24	3	6	0·8	1·5
2	2	9·1	21	6	12	1·5	3
3	2½	11·3	17	6	12	1·5	3
4	3½	10·9	17	3	6	0·8	1·5
5	5	15·9	12	6	12	1·5	3
6	5	13·6	14	6	12	1·5	3
7	7	18·6	10	6	12	1·5	3
8	9	30·0	12	9	18	2·8	4·5
9	8	19·6	9	6	12	1·5	3
10	15	57·3	7	9	18	2·8	4·5
11	20	36·4	10	9	18	2·8	4·5

TABLE II.—*Summary of Findings. In=before treatment; 1=after one week; 2=after two weeks of treatment.*

Case No.	Haemoglobin (g./100 ml.)			Sickled Cells (%)			Reticulocytes (%)			Alkali Reserve (mEq/l.)			Serum Na (mEq/l.)			Serum K (mEq/l.)			Serum Cl (mEq/l.)	
	In	1	2	In	1	2	In	1	2	In	1	2	In	1	2	In	1	2	1	2
1*	7·4	6·2	6·7	13	10	6	6	4	7	—	—	—	—	—	—	—	—	—	—	130
2*	7·7	6·7	8·4	9	6	3	5	7	4	—	—	—	—	—	—	—	—	—	—	135
3*	6·4	6·7	6·7	5	3	3	14	6	6	—	—	—	—	—	—	—	—	—	—	130
4‡	8·1	6·6	8·0	13	4	3	3	20	12	20	25	16	120	140	119	4·9	3·6	3·2	115	110
5†	4·9	8·8	7·2	13	9	10	10	35	3	26	23	20	130	130	129	4·2	3·5	3·4	—	110
6	8·3	8·9	7·7	20	7	12	9	8	13	29	22	17	119	117	120	5·8	3·1	2·9	105	113
7	6·8	6·8	6·7	20	13	14·5	7	14	9	29	20	19	120	126	120	4·5	3·7	3·4	118	115
8	7·7	7·4	7·4	18	14	10	12	6	8	27	25	18	125	130	130	5·3	3·7	4·5	110	115
9†	6·5	8·0	7·5	14	12	14	25	28	5	26	23	20	134	130	129	4·0	3·0	3·1	—	115
10†	6·5	7·7	7·1	16	22	13	16	18	9	28	22	19	130	129	129	4·1	3·8	4·1	—	120
11‡	12·0	9·8	10·7	6	14	3	4	4	4	27	20	17	125	119	120	4·2	3·4	3·4	120	120

* Treated as out-patients. † Recovering from sickle-cell crisis. ‡ Developing crisis on admission to hospital.

weight, and the dosage of acetazolamide per kg. body weight. Their ages varied from 7 months to 20 years and the dosage of acetazolamide was varied from 7 to 24 mg. per kg. body weight per day. Ten of these patients (Cases 1 and 10) suffered from sickle-cell anaemia and one (Case 11) from sickle-cell haemoglobin C disease. Three had already been admitted to hospital (Cases 5, 9, and 10) and five (Cases 4, 6, 7, 8, and 11) were specially admitted for the purpose of this study. Cases 4 and 11 developed a crisis on the first day after admission to hospital. Cases 1, 2, and 3 were studied as out-patients, but they were children of educated parents with a special interest in the disease, and we felt confident that they were given their treatment regularly. Acetazolamide was given in three divided doses, and the general regime was as follows. All patients received a daily supplement of sodium bicarbonate and potassium chloride in three divided doses, and Table I shows the amounts given daily to each patient in the first and second weeks. All patients also received a high-protein diet and "casilan" as an additional source of protein. The daily amount of casilan was varied, according to body weight, from 50 to 150 g.

In view of the fact that megaloblastic anaemia can be associated with sickle-cell anaemia and sickle-cell haemoglobin C disease (Captain and Dr. J. Watson-Williams, personal communication), we gave all patients "prenatal," a vitamin preparation which contains vitamins A, D, B_1, B_2, nicotinamide, B_{12}, K, C, and folic acid, as well as a generous supplement of calcium, phosphorus, iron, and manganese.

Table II shows the changes in haemoglobin level after one and two weeks. It will be seen that in Cases 5, 9, and 10 there was an increase of haemoglobin concentration after the first week, but these patients were recovering from sickle-cell crises. Patients 4 and 11, who developed a crisis on admission to hospital, showed a fall in haemoglobin level after the first week, but the other subjects showed no appreciable change. There was a tendency for the percentage of sickled cells to fall during the two weeks of treatment with acetazolamide. The reticulocyte count was particularly high in the three children recovering from crises, but was high also in two others. At the beginning of the experiment there was a tendency for the reticulocyte count to fall in all subjects.

The alkali reserve was determined only in the eight in-patients; there was a fall in alkali reserves in all, and in one (Case 4) it had fallen to the dangerous level of 16 mEq/l. at the end of two weeks. The day after the treatment finished, this child experienced a severe crisis. The sodium level was low to begin with in all of the eight patients examined, but there was no conspicuous fall in the course of the treatment. The potassium level was normal to begin with, but fell in the eight patients whose serum potassium was measured, and in six of them to below the normal level of 3.8 mEq./l. Even after the end of the second week, when the daily supplement of $NaHCO_3$ had been doubled, the serum chloride was high in all cases. Unfortunately, it had not been measured at the beginning of the trial, but had been determined at the end of the first week in five and at the end of the second week in all subjects. The serum bilirubin level was within normal limits in 7 of the 11 patients, and was above normal throughout the trial in the older children with sickle-cell anaemia (Cases 7, 8, 9, and 10).

Conclusion

The impression we gained from the two-weeks' observation of 11 patients with sickle-cell disease was that acetazolamide had little influence on the course of their anaemia. The observation extended over only a short period of time, but it was felt that if acetazolamide was inhibiting intravascular haemolysis significantly an effect on the haemoglobin level should have become noticeable. Obviously the metabolic acidosis caused by acetazolamide could not be counteracted by the sodium bicarbonate supplements. Neither was it possible to prevent the hypokalaemia by potassium chloride supplements. We considered a further increase in the supplements above the amount given during the second week as not practicable.

We thank Dr. G. Skinner for permission to study Cases 1 and 9, and Dr. J. D. Mabayoje for permission to study Case 10. These patients had already been admitted to the General Hospital, Lagos, under their care. The remainder of the subjects were all members of Dr. Mabayoje's panel of sickle-cell disease patients and were asked by him to take part in this trial. We also thank Dr. B. Gans for giving us the facilities of his wards. In addition we thank the medical and technical staff of the pathology department, particularly Mr. J. S. Ajayi, for their help with the laboratory work. One of us (W. D. d. S.) acknowledges permission to publish by the Minister of Health, Federal Government, Nigeria and the other (H. L.) would like to thank the Federal and Eastern Region Governments, Nigeria, for defraying the expenses of his visit to Nigeria.

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ACETAZOLAMIDE IN THE TREATMENT OF SICKLE-CELL ANAEMIA

BY

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AND

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Sickle-cell anaemia, together with other genetically determined haemoglobinopathies, is becoming an increasingly important cause of childhood mortality in the tropics as deaths from other tropical diseases steadily decrease in number. So far no treatment has been of any avail, and the only supportive measure of any real value during a crisis has been blood transfusion. Recently, however, it has been suggested that acetazolamide ("diamox") might be a valuable therapeutic agent, since it acts as a carbonic anhydrase inhibitor and was shown in one case to diminish intravascular sickling (Hilkovitz, 1957). We would therefore like to record our experiences of the use of this drug in three children with sickle-cell anaemia admitted to King George VI Hospital, Nairobi.

Case Reports

Case 1.—A child age 3 months was admitted with a chest infection and diarrhoea. The haemoglobin was 6.1 g./100 ml. and the spleen was enlarged to one fingerbreadth below the costal margin. Evidence of a haemolytic anaemia with a positive sickling test, an S+F pattern of the haemoglobin on paper electrophoresis, and the presence of the sickle-cell trait in both parents established the diagnosis. A transfusion was necessary because of the general clinical condition, and 100 ml. of blood was given intraperitoneally. Two days later a further transfusion of 200 ml. was given, after which the haemoglobin was 8.6 g./100 ml. Acetazolamide in a dosage of 10 mg. six-hourly was started. Though the picture was now slightly confused by the presence of the intraperitoneal blood, it was felt that acetazolamide, if of any value, should at least prevent the haemoglobin falling back to its original pre-transfusion level. Acetazolamide was continued for 35 days, after which time the haemoglobin was 7.7 g./100 ml. It was then stopped as the parents were refusing to keep the child in hospital any longer, but it seemed that the haemoglobin was slowly falling despite treatment.

Case 2.—A child aged 2½ years had been diagnosed previously as a case of sickle-cell anaemia and was admitted for investigation of a possible congenital heart lesion. The haemoglobin was 7.9 g./100 ml. On the 21st day after starting acetazolamide in a dosage of 21 mg. six-hourly, the child developed Koplik's spots and the haemoglobin had dropped to 5.4 g./100 ml. On the 23rd day the haemoglobin had further dropped to 4.2 g./100 ml. and the development of measles appeared to have coincided with a haemolytic crisis. This drop in haemoglobin had occurred despite continued treatment with acetazolamide.

Case 3.—A child aged 4 years was admitted with kwashiorkor and found incidentally to have sickle-cell anaemia (diagnosis being based on the same criteria as Case 1). Dietary treatment was instituted, and the child's nutritional condition had greatly improved when the development of a pyrexia, a dactylitis of the foot, and an increasing icterus indicated an incipient haemolytic crisis. The haemoglobin at this stage was 6.7 g./100 ml. and acetazolamide, 21 mg. six-hourly, was started to see if the development of the crisis would be in any way prevented or modified. However, despite treatment the haemoglobin fell dramatically, and six days later was only 3.5 g./100 ml. Diarrhoea then developed, so the acetazolamide was stopped and an intravenous blood transfusion was given. Acetazolamide appeared to have no effect, since the haemoglobin could scarcely have fallen more rapidly as the crisis developed.

Comment

The dosage of acetazolamide was based on Hilkovitz's suggestion of 7 mg. per kg. per day in four divided doses. At this level of dosage little effect on diuretic function was to be expected, and in fact no diuresis was observed. In any case, if an undetected diuresis had occurred the haemoglobin would have been expected to rise from haemoconcentration. In fact, none of the cased showed a rise in haemoglobin. In Case 1 it fell slowly, as would have been expected after transfusion. Case 2 actually went into crisis during treatment with acetazolamide, the crisis coinciding with the onset of measles. In Case 3 the development of the crisis appeared to be in no way influenced by the acetazolamide.

As the criterion of efficacy for any treatment of sickle-cell anaemia rests ultimately on its ability to prevent or decrease haemolysis, it appears that acetazolamide has failed in this respect, and its value as a therapeutic measure is open to doubt.

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INOCULATION RECORDING BY TATTOOING

BY

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With an increase in the immunization programmes of infants and children against many diseases the need for some method of indelibly recording the event in a readily available manner is receiving much attention. The use of cards for this purpose is by no means ideal, since they fairly rapidly become undecipherable if carried on the person and are often mislaid or discarded after a time. Dr. Parish (1959) has advised the use of engraved metal disks which would be carried on the person. These, however, although more permanent than the cards, are nevertheless subject to the disadvantage that they may be mislaid, and certainly in the course of time would very likely be discarded as a nuisance, perhaps when the information was most urgently required. Furthermore, the actual engraving would require special arrangements to be made in all hospitals and even in doctor's surgeries.

Importance of Tattooing

It must be recognized that both cards and disks allow a large amount of information to be recorded, not only of inoculations but also of other medical details. The importance, however, of having a permanently available record is not equal for all types of inoculation; for instance, whooping-cough and diphtheria are most likely to occur in the early years of life when any inoculations are still fresh in the memory of both doctor and parents, and there has been little time for card records to be mislaid or obliterated. In the case of tetanus, on the

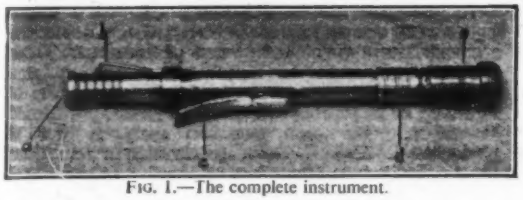

FIG. 1.—The complete instrument.

other hand, the circumstances are different for three main reasons: (1) many years may have elapsed since the inoculation, which in any case, if performed in infancy, is outside the patient's memory; (2) the patient may be unconscious; and (3) it is routine practice in many hospital receiving-rooms to give A.T.S. for all types of injury, even minor ones, in which the skin is penetrated. In the case of tetanus inoculation, therefore, it is exceedingly important that the record should be really permanent and on the person of the individual; the only way of satisfying these requirements is by tattooing.

To overcome the difficulty which tatooing involves of recording several inoculations given simultaneously it

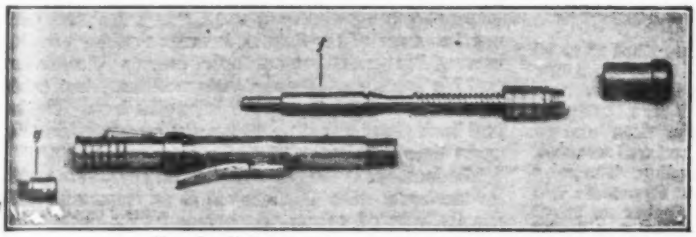

FIG. 2.—Component parts

would be possible to adopt some form of standardized coding recognizable by all concerned, whereby a single letter or design could be used to cover these several immunities. Even this would not overcome the difficulty of recording subsequent inoculations, and clearly the number of letters which might be tattooed is for aesthetic reasons limited. For the important tetanus inoculation, however, the single letter T would be sufficient. It has been suggested that to use tattooing for this purpose is facetious, but perhaps this is one of those facetiae which deserve serious attention, for, as will appear, the process can be done easily and instantaneously at the time of the inoculation.

The desirable characteristics of such a tattoo are that it must be obvious when looked for and yet not conspicuous, and this immediately raises the question of position, for the site should be standardized, hidden, and yet easily available for inspection. The lateral aspect of the great toe, the inside of the lip, under cover of the ear over the mastoid, over the hip just below the iliac crest have all been canvassed as possible sites, but the latter position seems on the whole the most suitable. Clearly, if the method is adopted the site and side of the mark would have to be established at a national or perhaps even international level.

The Tattooing Instrument

For performing the tattoo I have devised and made the instrument shown in the photographs. It is about the size of a fountain pen and is in effect a spring gun which on being released drives a "bullet" (*g*) having needle points arranged in the form of a letter T through a paste of dye for a predetermined distance into the skin. The best dye for this purpose is ordinary commercial lamp black mixed to a paste with a little water and sterilized by heat. The "bullet" itself, the needle-points of which alone penetrate the skin, can be sterilized by boiling or chemically by immersion in "dettol" in spirit. A little of the paste is applied to the cleaned skin of the area, the "bullet" is inserted into the muzzle of the gun (*a*), where it is held by a light spring (*b*), and the plunger (*f*) is withdrawn to its full extent. The gun is now applied firmly to the skin and the trigger (*c*) pressed. The tattooing is instantaneous and practically painless. Depth of penetration (usually 2–3 mm.) is controlled by adjustment of the screwed cap (*d*) and depends upon the thickness of the skin at the selected site and on the age of the patient. Extra bullets (with other designs if necessary) can be accommodated in the hollow head of the plunger (*e*). I have found that needle-points prepared from stainless piano wire by grinding give a better tattoo than the very highly polished and smooth commercial article.

FIG. 3.—Enlarged view of "bullet."

The tattoo, of course, consists of a series of dots arranged in the form of a "⁝"; is easily identifiable but not conspicuous, and, like all tattoos, is permanent. It is probable that a tattoo performed in infancy will stretch with the growth of the child, but, although sufficient time has not elapsed to observe if this is so, it seems unlikely that it will be enough to render the mark unrecognizable.

For the photographs I am indebted to Miss Turnbull, of the photographic department, Charing Cross Hospital.

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Medical Memoranda

Further Evidence of the Association between Mercury and Pink Disease

Warkany and Hubbard (1953) have presented impressive evidence of the association between pink disease and mercury. They have examined this problem from many aspects and quote a total of 97 references in the world literature. Despite this a considerable amount of scepticism exists (Naish, 1955; Farquhar *et al.*, 1956), mainly because a number of cases occur in which there is no evidence of mercury ingestion as judged by the

history and urine analysis. The following case strengthens the evidence incriminating mercury.

CASE REPORT

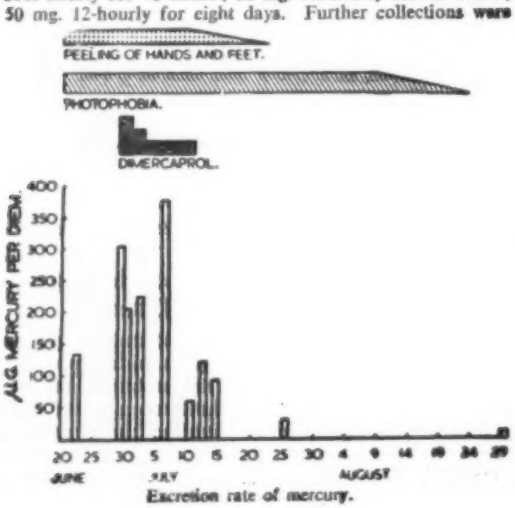
The patient was a 6½-year-old boy, the eldest of four children. His father suffered from a stricture of the oesophagus and used a mercury-filled bougie with which to dilate it. The rest of the family were healthy and there was no history of allergic disorders. At the end of March, 1956, the patient, his sister aged 5 years, and his brother aged 3½ years were found playing with the bougie in their bedroom, using it as a whip. Not surprisingly it suddenly ruptured, scattering the mercury over the bedroom carpet just as one of their parents entered the room. Most of the mercury was quickly collected and removed.

In mid-April (two weeks later) the patient began to lose his appetite and became listless and sleepy. About a week later his brother also lost his appetite and became peevish. Both lost weight, but the patient was clearly more severely affected. Photophobia and lacrimation became marked. He complained of pains in his legs, and his gait became floppy. Sometimes his schoolmates carried him part of the way home.

By the beginning of June sudamina appeared on his palms and soles, and later the skin started to peel. The brother, on the other hand, was showing some improvement by this time, and by mid-June had apparently recovered. He had been under the care of the family doctor during this time. The sister, the third member of the family who had been exposed, at no time showed any upset.

The patient was first brought to the out-patient clinic of Stirling Royal Infirmary on June 13, 1956, when the symptoms had reached their worst. His weight was 2 st. 12 lb. (18.1 kg.)—expected weight 3 st. 7 lb. (22.2 kg.)—and he was thin, pale, and miserable, with marked photophobia. The hands and feet were red and sweating, and the skin on the palmar aspects was peeling. The pulse was 140 and the blood pressure 125/90. Hypotonia was present. There was no disturbance of bladder or bowel function. The clinical picture was that of pink disease, and when it was mentioned to the father that there was sometimes an association with mercury he immediately recalled the incident with bougie. Other relevant findings on admission to hospital were: Urine, free of albumin and other abnormal constituents; haemoglobin, 10 g. per 100 ml.; no eosinophilia present; serum cholesterol, 170 mg. per 100 ml. *X*-ray examination of long bones gave no evidence of abnormality.

A 24-hour collection of urine was found to contain 188 µg. of mercury per litre. In view of this, treatment with dimercaprol was started. The dosage schedule was 50 mg. four-hourly for 48 hours; 50 mg. six-hourly for 48 hours; 50 mg. 12-hourly for eight days. Further collections were made at intervals, and the mercury excretion rates per 24 hours are presented in the Chart. The first sign of improvement was an increase in his appetite, which became apparent three days after the onset of treatment. During the ensuing month all other signs and symptoms disappeared, and he had made a full recovery by the beginning of September, when he had gained considerably in weight. The most persistent symptom was the photophobia. Hydrocortisone eye ointment was used for a short period but had no effect.



Excretion rate of mercury.

COMMENT

In Great Britain it is rare for a child of 6 years to develop pink disease. Thus Fisher (1947) reviewed 65 cases seen at the Royal Manchester Children's Hospital between 1932 and 1945; the oldest patient being 4 years 2 months at the onset. In another series of 31 cases (Leys, 1950) the oldest was 3 years at the onset. Exposure to metallic mercury is also a rare event. The chance association of these two happenings is so slight that there can be little reasonable doubt that the mercury was responsible for the development of the disease two weeks later. This is further strengthened by the fact that his brother, who was later found to be excreting mercury in his urine in a concentration of 88 µg. per litre, developed a mild form of the disease. It has been argued that the presence of mercury in the urine and presumably in the tissues as well is merely incidental and not the cause of the disease, because teething powders were widely prescribed for fretful infants. As this boy and his brother were apparently well until two weeks after exposure this argument is invalid here. Neither had been given any drug in powder or other form for some time previously.

The increase in the amount of mercury excreted while on treatment with dimercaprol is in agreement with the findings of others (Andersen, 1951; Holzel and James, 1952; Warkany and Hubbard, 1953), as is the marked variation from day to day. It is difficult to believe that this small increase lasting only the 10 days of treatment could make a significant difference to the course of the disease. It would seem likely that the remission in the present case was spontaneous. Indeed, the brother had started to improve a few weeks earlier without treatment.

Most of the reported cases of pink disease have followed exposure to a mercurial salt either as a topical application or by ingestion. It is interesting that the brief exposure to the element itself in this case was sufficient to permit absorption of even the small amount present. Elemental mercury vaporizes sufficiently at room temperature to permit the absorption of toxic amounts (Hunter, 1955). It is likely that the sudden rupture of the bougie with widespread scattering of the metal encouraged this process, with contamination of the atmosphere.

My thanks are due to Dr. E. B. Hendry, of the Western Infirmary, Glasgow, for the estimations of urinary mercury and to Professor Graham for his interest in this case.

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Reviews

AN INDISPENSABLE BOOK

The Borderland of Embryology and Pathology. By R. A. Willis, D.Sc., M.D., F.R.C.P. (Pp. ix+627+33; illustrated. 90s.) London: Butterworth and Co. (Publishers), Ltd. 1958.

The "Borderland of Embryology and Pathology" is the rather curious title of the latest textbook of pathology by Professor R. A. Willis. It would be no exaggeration to say that at least two of this author's previous books—namely, "The Spread of Tumours in the Human Body" and "The Pathology of Tumours"—have each proved to be a landmark in the development of pathology. This latest book in a similar way has that special quality of registering progress, of marking where we stand at present, and indicating the direction for further advance.

In recent years it has become obvious that embryologists and pathologists have much to learn from each other. Professor Willis has shown in this book that there is much common ground or borderland which they can profitably and (thanks to his literary style) enjoyably share together. For instance, take gross malformations and listen to what Willis, in his characteristic way, has to say about these. "A widely held opinion which I have heard voiced by several distinguished anatomists and pathologists is that there is little more to be learnt from gross malformations and that time spent on their dissection and minute description is wasted. This opinion has arisen largely as a revulsion from the undiscriminating hoarding of monsters in museum pots. I sympathize with this feeling, but I do not share the opinion. The careful study of malformations has done much, and has much more still to do, to clarify our understanding of normal development. . . . Every malformation is the result of a natural experiment: the end product of a dynamic epigenetic process, in which organizers function, organ-formative fields arise, and growing tissues influence one another." (P. 174.)

There are two reasons why this book will prove useful both to the academic pathologist, engaged chiefly in teaching, and to the hospital pathologist, occupied chiefly with clinical pathology. The first is that it is literally a mine of information and an easy source of reference in questions related to normal development, malformations, inborn metabolic disorders, embryonic tumours or teratomas. The second reason why this book is destined to join the small collection of indispensable books is because it stimulates interest in a subject which has become a "growing point" in the development of pathology. With this in mind the author has added an appendix containing suggestion for further research. This is evidence (if such were needed) that Willis is indeed a wise man. He knows what he knows, and knows also what remains to be discovered.

CUTHBERT DUKES.

WORK ON COMMUNICABLE DISEASES

A Bibliography of Internal Medicine: Communicable Diseases. By Arthur L. Bloomfield, M.D. (Pp. 560+viii. 75s.) Chicago: University of Chicago Press. London: Cambridge University Press. 1958.

Dr. Arthur Bloomfield, professor emeritus of medicine at Stanford University, California, has for many years contributed articles to the *Stanford Medical Bulletin* and other American periodicals surveying the principal writings of the last century and a half on various diseases. "My selections," he says, "are primarily for clinicians and for those with a general interest in the subject rather than for specialists." Dr. Bloomfield's book is much more than a bibliography. Besides giving exact references to the historically important books and articles from the beginning of the nineteenth century and sometimes earlier right up to date, he summarizes each such contribution and discusses its place in the development of knowledge, relating it to earlier and later contributions. Thus in his survey of the literature on pneumococcal pneumonia, when he records Sir Lionel Whitby's introduction of sulphapyridine he indicates the controversy of the previous twenty years over chemotherapy or serotherapy, and discusses, with complete references, the original communications on other sulphonamides. Later he recalls that "when penicillin first became available supplies were scarce and uncertain, so that many cases were treated with serum, sulphonamides and penicillin." His survey of the literature of syphilis begins with John Hunter, whose errors in that field are very fairly assessed. It is valuable to find adequately surveyed the modern literature of diseases happily unfamiliar in Britain, such as cholera and plague. In a selective history some well-known names must be omitted, but it is surprising not to see S. A. M. Copeman's work in the chapter on vaccinia, since Dr. Bloomfield's surveys are generously international. The book, intended as the first of a series, can be thoroughly recommended for its scholarship and practical usefulness.

W. R. LEFANU

PROBLEMS OF COAGULATION

Klinische Methoden der Blutgerinnungsanalyse. By Prof. Dr. J. Jürgens and Dr. F. K. Beller. Introduction by Prof. Dr. M. Gänsslen. (Pp. 391+xvii; illustrated. DM. 56.) Stuttgart: Georg Thieme Verlag. 1959.

This book gives a careful and extensive treatment of the theory and of laboratory methods current in the coagulation field, with relatively brief accounts of symptomatology. It is written clearly and presents a lucid description of sometimes very involved concepts. Unfortunately, this lucidity does not always illuminate the diagrams depicting the gyrating sequences which take place in solidifying blood. These maps, resembling the Lilliputian reproductions of the London Underground system in ladies' pocketbooks, are not indeed confined to this work, but are the curse of present-day medical literature, clarifying perhaps the minds of their originators but hardly those of the readers.

The construction of the book is broadly similar to that by Biggs and Macfarlane, but one misses the flavour of personal discrimination which to the English-speaking reader is the great joy of *Human Blood Coagulation and its Disorders.* The senior author, an international authority in his subject, has been able to give descriptions of a number of methods which have originated in his laboratory, and many others have been added from a wide reading of the literature (although there are some notable omissions from the British references). In this *embarras de richesse* it is often difficult to know which technique the authors themselves would choose in a given situation. The book may be said to complement the Oxford classic, particularly providing the established worker with a valuable guide

to Continental work; but the beginner might not find the sort of help he would want.

It is always easy to point to differences of opinion or to errors of detail. One feels that the thromboplastin-generation test should have been given greater prominence among the investigations required for haemophilia. It would make unnecessary some of the other tests given, and it is, of course, the test *par excellence* for the differentiation of classical haemophilia from Christmas disease. Also, the *lapsus* that Factor IX (Christmas Factor) deficiency can be detected by the one-stage prothrombin time should be corrected. Two other points may be made. Numerous examples of calibration curves are given for assay procedures, but they have not been reduced to a uniform system and some at least might mislead a worker not already familiar with the principles of bioassay. Secondly, there is little clinical advice. For instance, heparin-retarded clotting times are described without a critical assessment of their relation to clinical states; and we could not find a section on haemostatic levels of antihaemophilic globulin in the plasma which should be attained by infusion in haemophiliacs undergoing surgery. What is needed now in a textbook on coagulation is a guide to the application of the results of coagulation tests in the management of patients. Excellent advice may indeed be culled from quite a number of scattered papers, but the time has surely come for that information to be collated and incorporated into textbooks.

This book is beautifully produced and generously illustrated. Only the price may prevent it from finding a place in the library of every serious student of coagulation.

G. I. C. INGRAM.

Studies on Fertility, Volume IX of the Proceedings of the Society for the Study of Fertility, includes papers read at the Society's Exeter conference, 1957. The volume opens with the first Oliver Bird Lecture, on the biochemical basis of spermicidal activity, delivered by Dr. T. Mann, and contains 14 other papers related to fertility in the human and in experimental animals. It is edited by Professor R. G. Harrison and published by Blackwell Scientific Publications, Oxford (pp. 169; illustrated; 25s.).

Planning for Victory over Disablement contains the proceedings of the seventh world congress of the International Society for the Welfare of Cripples, held in London in 1957 under the presidency of the Duke of Devonshire. It is available from the Central Council for the Care of Cripples, 34, Eccleston Square, London, S.W.1 (pp. 525; 21s.).

Introductory Psychology, by D. R. Price-Williams (pp. 203; Routledge and Kegan Paul, Ltd., 1959; 18s.), gives the elementary principles of the subject and is designed particularly for students of social work and allied disciplines. The author has arranged his material within a framework of five subjects—motivation, learning, perception, communication, and personality—to provide a bridge to the study of more specialized topics in psychology.

Some biologists consider that to the two great kingdoms of living creatures—the animals and the plants—a third should be added, the fungi. Difficult to classify satisfactorily with plants, and apparently even more remote from animals, their mode of life does make them a recognizably distinct, if exceedingly varied, group of organisms. In *Physiology of Fungi* (537 pages) Professor V. W. Cochrane, of Wesleyan University, U.S.A., summarizes recent views on their composition, chemistry, metabolism, and reproduction. The book is published by John Wiley and Sons Inc. and Chapman and Hall Ltd. for 78s.

A booklet on *Speech Recovery after Total Laryngectomy*, by Dr. C. J. Hodson and Miss M. V. O. Oswald, gives an account of the practical application of speech therapy for the laryngectomized patient, and describes an original technique for displaying the action of the pharyngeal muscles in the production of sounds when there is no longer a glottis. It is published by E. and S. Livingstone Ltd., price 2s. 6d. (36 pp., illustrated; 1958).

Dangerous Marine Animals (Putnam & Co. Ltd., London, 30s.) is a book of 146 pages about marine animals that bite, that sting, and that are poisonous to eat. The author, Dr. Bruce W. Halstead, an officer in the United States Naval Reserve, writes that the book is intended "to provide persons, encountering dangerous marine animals, with a ready source of information regarding the identification, geographical distribution, habits, and noxious characteristics of these animals." Though its purpose is not "to throw needless scares into the skin-diving populace," the illustrations of snouts, jaws, teeth, fangs, caudal stings, tentacles, flagellae, venom ducts, spines, and stinging cells will at least give the *chasse sous-marine* enthusiasts something to ponder. The book contains a mass of information and advice. Some of it is rather obvious: "Underwater caves which are likely to be inhabited by octopuses should be avoided by the inexperienced diver." Some of it practical: "Swimming soon after a storm in tropical waters in which large numbers of jellyfish were previously present may result in multiple severe stings from remnants of damaged tentacles floating in the water"; and sea lions "may become irritable and have been known to nip at divers." Some of it unexpected: "Numerous poisonings have resulted from eating the liver and kidneys of polar bears." Some of it decidedly off-putting, even to paddlers round the coasts of Britain: "The pain [caused by a weever-fish wound] gets progressively worse until it reaches an excruciating peak . . . morphine fails to give relief . . . there are no known antidotes."

Dr. Douglas Guthrie has revised his *History of Medicine*, first published in 1945, and has incorporated new material in the text and in a supplement at the end of the volume. His book provides in small compass an excellent introduction to medical history, especially suitable for students and for those approaching the subject for the first time. The accounts of the contributions of the Edinburgh School and of its forebear, Leyden, are particularly good. The book is published by Thomas Nelson and Sons Ltd., Edinburgh and Lodon (pp. 463+xvi; 72 illustrations; 1958; 42s.).

In *New and Nonofficial Drugs* the American Medical Association provides a useful collection of monographs on the pharmacological and clinical properties of drugs that have recently been introduced. The 1959 volume of this annual publication is now available (J. B. Lippincott; pp. XXVII+687; 30s.). The substances covered by the monographs include vitamins, hormones, anaesthetics, and enzymes as well as many other chemical agents.

A *Directory of Services for the Aged* in Victoria, Australia, sponsored and published by the Lions Club of Richmond, is the work of Dr. J. S. Collings and his colleagues at the Clarke-Hiskens Medical Centre, Richmond, Melbourne. The directory is in loose-leaf form, and is arranged in five sections to cover accommodation facilities; health services; general welfare and advisory services; recreational, educational, and social facilities; and employment services.

BRITISH MEDICAL JOURNAL
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THE EDINBURGH MEETING

There can be no doubt at all that the 3,500 medical men and women who attended the Joint Annual Meeting of the British and Canadian Medical Association at Edinburgh enjoyed themselves. The sun shone, the people of Edinburgh from the Lord Provost downwards added the warmth of their friendliness to the nobility of their great city, and the organizers of the meeting had provided for the members of the two Associations and their families an unsurpassed variety of scientific, cultural and social attractions. On all sides there was praise for those—British and Canadians together—who put so smoothly into operation, and with such little evidence of strain, the plans which had taken many months of detailed work to prepare and co-ordinate.

When members of both Associations had gathered in the Usher Hall for the Adjourned Annual General Meeting of the B.M.A. on July 20, Sir Arthur Thomson told the audience that they were about to hear the message, published last week, which the Duke of Edinburgh had specially recorded for the meeting. Brief and forthright, it was a message of encouragement, infusing vitality into the rather solemn dignity of a formal occasion. The Duke of Edinburgh would surely have approved Lord Adrian's address delivered later at the same meeting, for it was no ponderous contribution to be understood and appreciated only by learned specialists. Simply and eloquently Lord Adrian reminded his audience of how the doctor's concern for the mind of his patient had been influenced in this century by Freud, Pavlov and other workers and how necessary it was to continue to seek for "better ways of ensuring mental health, better ways of dealing with the frustrations of infancy, the revolts of youth, and the loneliness of old age." His was a message, like the Duke of Edinburgh's, entirely appropriate for this day and age.

We hope that when the printing strike is over we shall be able to publish some account of the proceedings of the Scientific Sections. At nearly all these meetings eminent Canadian speakers contributed to the discussions, and, in fact, the first of the Plenary Sessions, under the chairmanship of Dr. Norman H. Gosse, was given over entirely to an expression of authoritative Canadian opinion on "Trends in Modern Medicine." The enthusiastic interest of large audiences in the scientific programme was a tribute to the hard work put in by Professor G. I. Scott, the science secretary, and his assistants. The scientific Exhibition, in the able hands of Professor D. E. C. Mekie, was on a larger scale than ever before, and a keen student prepared to spend all the five days of the meeting studying the exhibits could have learned enough to amaze the most erudite of examiners. In the face of such strong competition the prize-winners certainly deserved their awards. The closed-circuit television programmes, organised by Dr. J. Innes, were also extremely popular, and, with film shows thrown in, visual education at Edinburgh was in strong rivalry with the conventional auditory methods. But if the ordinary section meeting is losing a little of its appeal, the round-table conferences are gaining in popularity because of the spontaneity and freshness of discussion which they encourage.

The Scientific Exhibition was not the only one to distract the visitor from his earnest endeavour to move from one point to another in a given time. At the museum of the Royal College of Surgeons of Edinburgh there was an historical exhibition depicting the life and work of Sir Charles Bell, and the collection of paintings by British and Canadian doctors at the College of Art provided a display of enviable talents. In addition, the pharmaceutical firms, publishing houses, and surgical instrument makers vied with each other in presenting useful information to the many who visited their stands.

There were never any doubts about the quality of Edinburgh's hospitality. But the chairman, Dr. J. G. M. Hamilton, the general secretary, Dr. E. R. C. Walker, and the members of the local executive committee of the City of Edinburgh Division could not fail to have been gratified by the delight of the visitors in the arrangements made for their reception and entertainment. If the ties between British and Canadian medicine are now stronger than they were, it is because of friendships made in Edinburgh, in private houses, at meetings, on excursions, and in the cheerful surroundings of the Assembly Club—one of the great attractions of the meeting. Under the joint chairmanship of Dr. Elizabeth A. Baxendine and Dr. Joan K. Sutherland the Ladies' Committee gave magnificent support to the local executive committee, arranging, to give just one example, a children's centre where parents could leave their young children in safe hands. Industry and commerce in and around Edinburgh also lent a willing hand in entertaining the visitors, and the owners of many private houses in the neighbourhood were generous in their hospitality.

Perhaps three functions in particular will stand out in the memory of those who were at Edinburgh—the Adjourned Annual General Meeting, which provides such a picturesque demonstration of the ties which bind doctors together no matter to which country or race they belong; the Garden Party at Holyrood Palace, where, by command of the Queen, the guests were received by the Duke of Hamilton, the Hereditary Keeper of the Palace; and the Graduation Ceremony at which six eminent medical men, three British and three Canadian, received the honorary degree of Doctor of Laws. Speaking at this ceremony Sir Edward Appleton, principal and vice-chancellor of the University of Edinburgh, said that the British and Canadian Medical Associations were each in their own way a university. They were like stock exchanges, but in the commerce of ideas and information there were no prices, no dollars and no pounds, for "the gain is won by giving"—fitting valedictory words for an outstandingly successful meeting.

ANAEMIA AFTER GASTRECTOMY

Pernicious anaemia may be expected to appear within a year or two of total gastrectomy. The operation removes all, or almost all, of the gastric fundus; this secretes the intrinsic factor, which ensures the proper absorption of vitamin B_{12}. When the store of vitamin B_{12} in the body is exhausted, megaloblastic anaemia appears. This anaemia responds promptly to treatment with parenteral vitamin B_{12}. After partial gastrectomy, which leaves the fundus intact, megaloblastic anaemia is much less common. L. D. MacLean,[1] for example, found in a 12-year period only nine cases of megaloblastic anaemia among 1,550 patients who had had a partial gastrectomy carried out. But other forms of anaemia after partial gastrectomy are common and well known. In 1928 J. Morley and W. M. Roberts[2] found hypochromic anaemia in 16 out of 42 patients; H. W. McIntyre and L. Stent[3] examined 100 patients who had had partial gastrectomy for peptic ulcer and reported in 1956 that 44 were anaemic, 28 having hypochromic anaemia. C. D. Anderson and colleagues[4] thought that the haemoglobin level was subnormal in most patients after partial gastrectomy.

This anaemia comes on insidiously, is usually diagnosed from two to eight years after the operation, and is nearly always of iron-deficiency type which responds to the administration of iron by mouth. But how or why the anaemia develops is not very clear. Chronic blood loss has often been suggested, but the evidence is equivocal. Evidence about defective absorption of iron is oddly contradictory. M. D. Smith and B. Mallett[5] found the absorption of iron salts was normal, but others[6 7] showed that iron was poorly absorbed from the food. Patients with partial gastrectomy have often to take a restricted diet, but this seems unlikely to be the cause of their continuing anaemia. Another suggestion was that the deflection of the stomach contents directly into the jejunum caused damage to the mucosa, with failure of function and possible loss of blood. I. M. Baird and O. G. Dodge[8] carried out jejunal biopsies on 17 patients who had developed iron-deficiency anaemia at times varying from two to nine years after the operation; in 14 the mucosa was quite normal; atrophy of the mucosa was present only in one severely affected patient with 42% haemoglobin; but two other equally anaemic patients had ndrmal mucosae.

Recently Baird and his colleagues[9 10] have published the results of a more extended effort to solve these problems. They were able to study 341 patients who had had partial gastrectomy of the Polya or Billroth types for peptic ulcer; the gastrectomies had been performed at various times up to 10 years before the survey. They found that haemoglobin levels decline slowly and on the whole steadily after gastrectomy. The decline was less in men than in women, and less in men who had the Billroth I operation than in those who had the Polya operation.

These workers found that iron deficiency was the predominant abnormality; only one case of megaloblastic anaemia occurred. As others before them, they found that loss of occult blood in the faeces was uncommon, and the few patients who had positive tests showed no clinical or radiological evidence of recurrent ulcer.

A decrease in absorption of iron was found only in the patients who received organic iron together with a full meal, and then the decrease was only small. A possibly more important finding was as follows: when organic iron is given with a meal to anaemic patients with intact stomachs, the uptake of iron is more than in the non-anaemic patient; but in patients with partial gastrectomy this greater uptake of iron when anaemia is present does not occur. This may explain, at least in part, why the anaemia is progressive in patients with partial gastrectomy; but for an explanation of why the anaemia occurs at all, Baird and his colleagues are driven back to the old hypotheses of deficient diet and haemorrhage, for neither of which is there conclusive evidence.

Fortunately, though we are still far from certain about the causes of the anaemia, we are clear about how it should be treated. Every patient who has had a partial gastrectomy should have regular blood counts at least once a year. When iron-deficiency anaemia appears, oral preparations of iron are adequate for most patients. A dose of about 200 mg.

[1] MacLean, L. D., *New Engl. J. Med.*, 1957, **257**, 262.
[2] Morley, J., and Roberts, W. M., *Brit. J. Surg.*, 1928, **16**, 239.
[3] McIntyre, H. W., and Stent, L., *ibid.*, 1956, **44**, 150.
[4] Anderson, C. D., Gunn, R. T. S., and Watt, J. K., *Brit. med. J.*, 1955, **1**, 508.
[5] Smith, M. D., and Mallett, B., *Clin. Sci.*, 1957, **16**, 23.
[6] Chodos, R. B., Ross, J. F., Apt, L., Pollycove, M., and Halbert, J. A., *J. clin. Invest.*, 1957, **36**, 314.
[7] Pizzio-Biroli, G., Bothwell, T. H., and Finch, C. A., *J. Lab. clin. Med.*, 1958, **51**, 37.
[8] Baird, I. M., and Dodge, O. G., *Quart. J. Med.*, 1957, **26**, 393.
[9] —— Blackburn, E. K., and Wilson, G. M., *ibid.*, 1959, **28**, 21.
[10] —— and Wilson, G. M., *ibid.*, p. 35.

of elemental iron each day is needed. This is provided, for example, by six 0.3 g. tablets of ferrous gluconate and should be combined with 200 mg. of ascorbic acid. For the few patients who do not respond to oral iron, intramuscular iron in a dose of 40 mg. Fe for every 1% (Haldane) haemoglobin deficit (0.15 g. per 100 ml.) can be given. If a high colour-index is noted, or the red-cell count falls out of proportion with the fall in haemoglobin, the possibility of megaloblastic anaemia should be considered. It is essential to have the diagnosis confirmed by bone-marrow biopsy before treatment is given. If confirmed, parenteral vitamin B_{12}, 250 μg. daily, is a suitable dose.

TRANSPORT OF CORTISOL IN PLASMA

The levels of steroid hormones in the plasma do not necessarily reflect their concentrations in extracellular fluid, and hence their availability to the tissues.[1 2] This is because the hormones and their conjugates are bound in varying degrees to the plasma proteins. By dialysing plasma containing the steroid, or preferably one of its radioisotopes, some idea can be got of its probable distribution between the blood and tissue fluids.

At least two non-dialysable components of plasma are responsible for the low activity of cortisol in the plasma.[3–6] One of these is albumin, with a high capacity but low affinity for corticosteroids; the other, present in the α-globulin fraction, has a low capacity but high affinity for cortisol and corticosterone. By analogy with transferrin, the iron-binding protein of plasma, W. R. Slaunwhite and A. A. Sandberg[7] have named this second component "transcortin." They believe that it is a protein, with the mobility of an α-globulin, and they are now trying to purify and characterize it more precisely. It is present in the blood of other mammals, though only in small amount in the dog. Unlike albumin, its capacity to bind cortisol increases with rise in temperature. It seems likely that transcortin will prove to be identical with or very similar to the components described by I. E. Bush,[3] W. H. Daughaday,[4 5] and I. H. Mills and colleagues.[8]

Its existence raises some interesting speculations. In the first place it is probable that cortisol bound to transcortin is biologically inactive. If it is, then physiological effects will appear only when the concentration of cortisol in the plasma exceeds the capacity of the transcortin to bind it, as during administration of cortisone or when corticotrophin is acting. In the later stages of pregnancy, despite a high level of cortisol in the plasma, there is no clear clinical evidence of it. This could in part be due to the increase in transcortin which has been found during the third trimester.[7] By contrast, some patients with Cushing's syndrome have a normal amount of cortisol in the plasma, and it is possible that they may be found to have subnormal levels of transcortin.

Mills and colleagues[8] have reported that the specific binding protein for cortisol, which is probably transcortin, is greatly increased after giving oestrogen. The newborn baby, however, was exceptional in that the level of this protein was low despite a high level of oestrogen in the plasma. This suggests a failure in synthesis of the protein. These authors have also put forward suggestive evidence of a reduction of the cortisol-binding protein in a patient on treatment with cortisone, which might explain the increased rate of cortisol metabolism which they had previously detected in some patients on cortisone. These and other similar problems may well be solved in the near future if transcortin can be isolated.

[1] Cope, C. L., and Hurlock, B., *Brit. med. J.*, 1953, **2**, 753.
[2] Baron, D. N., and Abelson, D. *Nature* (*Lond.*), 1954, **173**, 174.
[3] Bush, I. E., *Ciba Colloq. Endoc.* 1957, **11**, 263.
[4] Daughaday, W. H. *J. Lab. clin. Med.* 1956, **48**, 799.
[5] —— *J. clin. Invest.* 1958, **37**, 519.
[6] Sandberg, A. A., Slaunwhite, W. R., and Antoniades, H. N., *Recent Progr. Hormone Res.* 1957, **13**, 209.
[7] Slaunwhite, W. R., and Sandberg, A. A., *J. clin. Invest.*, 1959, **38**, 384.
[8] Mills, I. H., Chen, P. S., and Bartter, F. C., communication, Joint Endocrine Meeting, Roy. Soc. Medicine, April 25, 1959.

CHALK IN THE LUNGS

Pulmonary alveolar microlithiasis was first described by F. Harbitz in 1918.[1] Since then, a further fifty cases have been recorded in the world's literature, including three from Great Britain. By far the largest series was that of M. C. Sosman and colleagues,[2] who collected twenty-three fresh cases and emphasized the familial nature of the disease. The essential pathological feature comprises intra-alveolar, calcified, laminated concretions in the absence of any known disturbance of calcium metabolism. The calcification presumably derives from an intra-alveolar capillary exudate, but whether the associated infiltrations of mononuclear and giant cells are part of a primary process or a reaction to the concretions is unknown.

The diagnosis is usually made on routine radiography, which shows miliary calcification of such extreme density that, once recognized, it can hardly be mistaken for anything else. The symptoms are usually slight or absent until the terminal stages, when increasing dyspnoea quickly leads to heart failure. Most cases have been discovered in early adult life, but the age of patients has ranged from 6 to 66. So far as is known, the process is irreversible, and causes such widespread alveolar damage that it must usually be fatal, though it may run a long course. A patient described by A. Manz[3] was known to have had the disease for twenty-five years before she died from congestive cardiac failure at the age of 37. Physical examination often reveals rales throughout both lungs, and the fingers may be clubbed. Studies of pulmonary function indicate, as might be expected, impairment of gas diffusion in the alveoli and uneven distribution of gas and blood in the lungs.[4]

As the cause of the disease is unknown, treatment is most unsatisfactory. Inded, advice on avoiding respiratory infections, and administration of oxygen and antibiotics in times of crisis, are all that can be offered.

[1] Harbitz, F., *Arch. intern. Med.*, 1918, **21**, 139.
[2] Sosman, M. C., Dodd, G. D., Jones, W. D., and Pilmore, G. U., *Amer. J. Roentgenol.*, 1957, **77**, 947.
[3] Manz, A., *Beitr. klin. Tuberk.*, 1954, **11**, 398.
[4] Thomson, W. B., *Thorax*, 1959, **14**, 76.

PRINTING UNDER DIFFICULTIES

A NOTE BY THE EDITOR

A photograph of pickets outside B.M.A. House was published in the *Journal* of July 25. At the time of writing, the pickets have made one further appearance with similar placards, placards asking doctors to boycott the *British Medical Journal* and accusing us of being blacklegs. Pickets in various places and at various times have become a familiar part of our daily routine.

In our successful efforts to produce the B.M.J. each week, through the magnificent help given us by printers who have non-union shops and who do not belong to the British Federation of Master Printers, vans containing the B.M.J. in various stages of preparation have been followed by cars driven apparently by "picketeers." One of them tracked the van carrying *Journal* sheets to a bindery and succeeded in putting this out of action so far as we were concerned. Hence the continued delay in distribution. But improvisation won the day. It was at that stage that the rolling of the *Journal* into wrappers was done in Committee Room C of B.M.A. House.

British and Canadian doctors attending one of the plenary sessions at the Edinburgh meeting were handed roneoed copies of a letter from Edinburgh printers complaining of the way the B.M.J. was being produced. The protest was put on a more formal basis when I received on July 27 the following letter from Mr. G. G. Eastwood, general secretary of the Printing and Kindred Trades Federation:

> " I am writing on behalf of the printing trade unions to enter a strong protest at the attitude of your Association in having its journal printed by non-trade union labour.
>
> We consider that an organization such as yours, which is in itself a trade union, should not do anything to injure the interests of another union and weaken the efforts of any class of workers to obtain an improvement in wages and working conditions.
>
> Over 1,500 firms in the country have agreed to the unions' terms for exemption from the dispute, and we have been able to assist a very large number of print buyers to get their work done. I need hardly say that the action of your Association is subject to much unfavourable comment, and we had hoped for an opportunity to be of assistance to you in your difficulty."

Because of his last sentence readers may like to know what has happened. In passing I might add that I informed Mr. Eastwood straight away that the British Medical Association is not a trade union.

When it was known that a dispute between employers and employees in the printing trade might make it impossible to continue printing the B.M.J. in the usual way, alternative methods of production were considered at a meeting of the Journal Committee on April 13. Of these, the one least favoured was that of printing the *Journal* abroad, and the Committee quickly agreed that the first duty of an editor is to bring out his journal in any way possible, whatever the snags.

So on June 13, a week before the machines came to a stop at our printers in St. Albans, I sent the following letter to the secretary of the British Federation of Master Printers, and also to Mr. G.G. Eastwood, general secretary of the Printing and Kindred Trades Federation:

> " It seems that after Friday, June 19, we shall for an unknown period be unable to continue printing the British Medical Journal at the Gainsborough Press (Fisher Knight and Company) at St. Albans. In other words, the publication of the British Medical Journal may, owing to circumstances outside our control, be suspended — something which did not happen during the whole of the recent war in spite of the fact that the works of our printers at that time were completely destroyed in May, 1941.
>
> In this war, and in World War I, the Government recognized the British Medical Journal to be a work of National importance, and a special allocation of paper was made because of this.
>
> If the weekly publication of the British Medical Journal was looked upon as being essential to the health of the people of this country then, it is all the more so now in view of the new discoveries in medicine made almost weekly which, when applied by the practising doctor, restore his patients to health and wellbeing.
>
> There can be no question but that the withholding of information from doctors by the compulsory suspension of a publication which, as two recent surveys have shown, is read by between 80 and 90% of the practising medical profession in Britain, will be damaging to the work of the medical profession, and therefore damaging to the health of the people.
>
> To illustrate my point, I will give you just two recent instances. In May this year we published a paper recording for the first time a most remarkable advance in the treatment of cancer of the breast, one of the commonest forms of cancer in this country. Upon the publication of this paper depended the dissemination of information which would bring relief to sufferers not only in this country but in others. I may add that our printers in St. Albans made a special effort to help us to print this article in the B.M.J. at the earliest possible moment.
>
> Again owing to the co-operation of our printers, we shall manage to publish in the British Medical Journal of June 20 a paper which could not get to Messrs. Fisher Knight until Monday, June 8. This gives an account of a recent widespread trial of a new type of poliomyelitis vaccine. The principal worker in this trial, Professor Hale, is going to communicate the results at a special meeting of the World Health Organization on June 22. The Chief Medical Officer of the Ministry of Health has been anxiously inquiring about the publication of this paper, because obviously it may affect considerably the Ministry's plans for dealing with an epidemic of poliomyelitis should it occur in the latter part of the summer. If this paper of Professor Hale's had arrived a week later it would have been impossible to have published it in the B.M.J. of June 27, and therefore possibly not until some weeks later
>
> The rights and wrongs of the present dispute are, of course, no concern of mine. I do, however, most earnestly beg you to consider whether you would

look into the possibility of ensuring the continued publication of the *British Medical Journal* at Messrs. Fisher Knight's printing house. If my letter has not convinced you of the national interest of this, I should be only too happy to amplify what I have said at a personal interview."

Mr. Eastwood telephoned to say that if Messrs. Fisher Knight would meet the unions' demands they could continue to print the *B.M.J.* I suggested that it would be as much out of place for me to tell the Federation of Master Printers what they should do as it would be for me to tell him. A few days later the director and secretary of the British Federation of Master Printers informed me that Mr. Eastwood had said that "the only way in which work could continue to be done on your journal would be for the firm to resign its membership of the British Federation of Master Printers and to agree to the demands of the unions."

This attempt having failed, we went ahead with our plans to produce the B.M.J. with the cheerful and willing help of the Free Press Ltd. in Islington and the Hollyfield Press in Friern Barnet.

Seeing a report in the *Evening Standard* of June 25 that Mr. Bonfield, secretary of the Typographical Association — one of the largest of the printing unions — had excluded from the ban matters vital to health, I telephoned him on June 26 to find out how this affected the B.M.J. He seemed to accept my argument that continued publication of the *Journal* was necessary for the health of the people of this country. Hearing him ask for a list of "white" printers, I said he should know that the *Journal* was then being printed by a non-union house as we had failed in our previous efforts to continue printing in the normal way. He replied — "You have put me in a very difficult position." I suggested that it was we who had been put in a difficult position, and there Mr. Bonfield felt compelled to leave us. And so after yet another failed attempt to secure publication in a "normal" way we had to continue bringing out the B.M.J. week by week in the face of a number of obstacles it has been an exciting experience to overcome.

There have been imperfections in the printing of the *Journal*. There has been a delay in distribution. It has been impossible to publish matter which otherwise we should have liked to publish. Vans containing printed sheets of the *Journal*, galleys of type, *Journal* covers, have had to pursue devious ways in order to throw pursuing cars off the scent. Members of the various sections of the publications departments at B.M.A. House have worked for stretches of 10-12 hours a day doing jobs that would horrify both the master printer and skilled and unskilled workers in the printing industry. I myself have ruined two pairs of grey flannel trousers through unexpected contact with printers ink. My colleague Dr. T.D.V. Swinscow has discovered new ways of exercising his gift for high-precision workmanship. The Business Manager nearly singed his eyebrows in the printer's foundry.

Our sole duty and our sole intention was to bring the B.M.J. out each week in however imperfect and short a form. One recent example of the necessity for continued publication. We read early in July an article describing a serious hazard arising from the use of the Beaver ventilator used for positive-pressure respiration in anaesthesia and for severe respiratory paralysis in poliomyelitis. The author and the manufacturer were anxious that this hazard should be published immediately so that the risk could be known and avoided. The article by Dr. E. Harvey Franks published in the Journal of July 25 was mercifully short. Our emergency printers put other things on one side in order to set the article, and we published it in what under normal conditions would have been almost a record time.

We do not deny that Mr. Eastwood (see his letter of July 27) "had hoped for an opportunity to be of assistance" in our difficulty. Readers of this brief record may agree that a hope expressed six weeks after our first approach to him is not much help. In the meantime we have had this help in a way that does not commend itself to him. We regret this as much as he does, because the recent dispute has temporarily severed the very happy relationship we have for years enjoyed with a body of workers who, we have every reason to believe, are as proud of the B.M.J. as those of us who work at B.M.A. House.

Once again I should like to stress that those responsible for the emergency printing of the *British Medical Journal* since June 27 are completely outside the present dispute, as neither the employers nor the employed belong to the two organizations whose controversy has threatened the freedom of the press and the free and uninterrupted flow of essential information to men and women performing essential services. It has been our duty to keep this information on the move. What we have done has been legal. To challenge this is to challenge freedom and liberty, and one could perhaps do worse than end with the following quotation from Montesquieu:

"La liberté est le droit de faire tout ce que les lois permettent."

HUGH CLEGG.

Nova et Vetera

JOHN BORTHWICK GILCHRIST

A PIONEER OF GYMNASTICS

Among the colourful Scottish surgeons, John Borthwick Gilchrist (born 1759) deserves a place. Entering the service of the East India Company in 1783 as an assistant surgeon, he soon realized how essential it was to know the vernacular languages of that vast subcontinent. Dressing himself as a native of it, he set himself to master Hindustani. Within four years he was able to publish a dictionary of that language, and after another nine years he compiled a grammar. By 1800 his knowledge of the Indian tongues was such that he was appointed the first head of the Fort William College in Calcutta. This pioneer venture was later recognized in the renewed charter of the East India Company in 1813, which contained a clause insisting that at least one lakh of rupees a year "shall be set apart and applied to the revival and improvement of literature, and for the introduction and promotion of knowledge of the sciences among the inhabitants of the British territories in India."

By that time Gilchrist had returned to Britain, and from 1804 to 1816 he lived in Edinburgh, starting a bank and keeping an aviary of Eastern birds. Drawn by his intense absorption in Oriental languages to London in 1816, he began to teach them to East India Cadets, a service much appreciated by the East India Company, which gave him a professorship and a fixed salary. Gilchrist taught at the Oriental Institution, Leicester Square, and supplemented his salary by insisting that the students bought his books, refusing to allow them to attend his lectures unless they showed a receipt of purchase. Such unprofessional conduct naturally evoked resentment. Coupled with Gilchrist's own republican views, it led to the East India Company withdrawing support for his classes.

During his years in India, Gilchrist also acquired a great admiration for Indian gymnasts and tumblers. This, too, he was able to communicate to students in London, both at the newly founded London Mechanics' Institute (of which he was elected one of the four first vice-presidents in 1823) and at the newly founded University of London. His activities in the university were aptly caught by R. H. Barham of *The Ingoldsby Legends* ("London University or Stinkomalee Triumphans") in a letter dated April 15, 1828:

> And GILCHRIST, see, that great Gentoo-
> Professor, has a lot in town
> Of Cockney boys, who fag Hindoo,
> And *larn Jem-nasties* at the U-
> niversity we've Got in town.

Gilchrist took gymnastics, like Oriental languages, very seriously. He organized a meeting at the Mechanics' Institute on February 22, 1826, "to consider the expediency of establishing a school for the teaching of active bodily exercise." In his address he indicated the longevity of dancing masters. Citing the freedom of his own youth in Edinburgh, he lamented that the recent metropolitan developments initiated by John Nash had virtually excluded the working classes from Regent's Park, so that there was little for them to do after studying at the Mechanics' Institute but take to the taverns. So, since playing fields were not obtainable, he proposed the foundation of a London Gymnastic Society. This was to hire a piece of ground for exercises in the summer months when the Mechanics' Institute was closed, and do for the bodies of the mechanics what the institute was doing for their minds. A subscription of half a crown a month was to be levied on all members.

For a time all went well. The Society secured the services of Karl Voelker (1796–1884), a distinguished disciple of the great German gymnast, Turnvater Jahn. Voelker had recently arrived in London and was already running a garden gymnasium near Regent's Park. Under his direction the membership grew to 700. Local doctors rallied to the cause, and among others who enlisted was the famous caricaturist, George Cruikshank. Other branches were foreshadowed at a meeting held five months later at Bethnal Green.

Unfortunately the Society lost its energetic secretary, Thomas Latimer, who was offered a post with a newspaper in Exeter. (Characteristically, as befitted a pupil of Gilchrist, he walked back to London from Exeter to resign his secretaryship, and his biographer has indicated that he submitted plans for a central gymnastic school to serve the whole of Devonshire, which was never built.)

Another cause of the Society's failure was Gilchrist's desire to set up another school of Oriental languages, which he did in 1826, in opposition to his successor at the Oriental Institution in Leicester Square. Finding this a little too much for him, he then turned to popularizing the "New System of Physic" of C. F. S. Hahnemann (1755–1843). Gilchrist warmed to Hahnemann's insistence on the evils of too much drugging, and in his *Practical Appeal to the Public* (1833) put forward a powerful defence of Hahnemann's ideas. But eccentrics, though they help the world to turn, rarely turn it themselves. Gilchrist was left with no Oriental Institution, no Gymnastic Society, and, after 1831, no office in the Mechanics' Institute. He died in 1841, two years before Hahnemann, and a year before Thomas Arnold, the great headmaster of Rugby School, who did so much to set the "muscular" tone of Victorian education.

W. H. G. ARMYTAGE.

APPROVED NAMES

The last supplement to the consolidated list of "approved names" was published in the *Journal* of April 4, 1959 (p. 918). A new supplement, dated June, 1959, is printed below. Communications relating to "approved names" should be addressed to the secretary, British Pharmacopoeia Commission, General Medical Council, 44, Hallam Street, London, W.1.

Approved Name	Other Names	Notes
Benzethidine ..	Ethyl 1-(2-benzyloxyethyl)-4-phenylpiperidine-4-carboxylate	Analgesic
Bretylium tosylate	*N*-o-Bromobenzyl-*N*-ethyl-*NN*-dimethylammonium tosylate (tosylic acid is adopted as the trivial name for *p*-toluenesulphonic acid) "Darenthin"	Treatment of hypertension
Dichlorphenamide	1: 2-Dichloro-3: 5-disulphamoylbenzene "Daranide"	Carbonic anhydrase inhibitor
Diprophylline ..	7-(2: 3-Dihydroxypropyl)theophylline "Isophylline"; "neutraphylline"; "silbephylline"	Similar to aminophylline
Furethidine ..	Ethyl 1-(tetrahydrofurfuryloxyethyl)-4-phenylpiperidine-4-carboxylate	Analgesic
Imipramine ..	1-(3-Dimethylaminopropyl)-4: 5-dihydro-2: 3-6: 7-dibenzazepine "Tofranil" is the hydrochloride	Treatment of depressive states
Iodipamide ..	*NN'*-Adipoylbis(3-amino-2: 4: 6-triiodobenzoic acid) "Biligrafin" is the bis-*N*-methylglucamine salt; "endografin" is the bis-*N*-methylglucamine salt	Radiological contrast medium
Metaraminol ..	(−)-2-Amino-1-*m*-hydroxyphenylpropan-1-ol "Aramine" is the hydrogen (+)-tartrate	Sympathomimetic amine
Methocarbamol	2-Hydroxy-3-o-methoxyphenoxypropyl carbamate "Robaxin"	Skeletal muscle relaxant
Methotrexate ..	4-Amino-10-methylpteroylglutamic acid Amethopterin	Antineoplastic drug
Phanquone ..	4: 7-Phenanthroline-5: 6-quinone "Entobex"	Amoebicide
Phenelzine ..	Phenethylhydrazine	Treatment of depressive states
Phenglutarimide	α-2-Diethylaminoethyl-α-phenylglutarimide "Aturbane" is the hydrochloride	Treatment of Parkinsonism
Sulphadimethoxine	6-*p*-Aminobenzenesulphonamido-2: 4-dimethoxypyrimidine "Madribon"	Long-acting sulphonamide

The West Suffolk Federation of Women's Institutes has passed a resolution calling for doctors' surgeries to be sound-proofed so that consultations could not be overheard by waiting patients. The mover said that in many consulting-rooms almost every word said by doctor and patient could be heard in the waiting-room, and many people hesitated to go to the doctor because of this lack of privacy.

Correspondence

Routine Respiration Counts

SIR,—May I take this opportunity to lend my support to the plea of your correspondent from Uganda, Dr. D. P. Burkitt (*Journal*, June 13, p. 1527), to the effect that respiration counts be eliminated as a routine nursing measure?

In this connexion, I should like to direct your attention to an investigation into this matter that was carried out by Kory in a Wisconsin Veterans Administrative hospital[1]. In his study, Kory estimated that the elimination of such a routine, which he labelled "an expensive tribute to tradition," would save over 3,500,000 hours of personnel time each year in United States hospitals. Kory recommends that in place of routine respiration counts, the physician should write a specific order for those patients for whom observation of respiration is necessary. The sister, in such instances, should provide information in her notes as to the character, as well as the rate, of respiration in the patient.—I am, etc.,

GEORGE X. TRIMBLE.

Seaside Memorial Hospital of Long Beach,
Long Beach, California.

REFERENCE

1 Kory, R. C., J. Amer. Med. Ass., 1957, 165, 448.

SIR,—I heartily agree with the sentiments expressed by Mr. D. P. Burkitt (*Journal*, June 13, p. 1527). I am sure that far too much time is spent by nurses in making routine, useless observations, particularly in a surgical ward. Mr. Burkitt may be interested to know that this problem has been tackled in one surgical unit where the whole question of temperate charts has been revised.

The patient's temperature, pulse, and respiratory rates are all taken twice daily by the nurse, and written into sister's ward day-to-day book. The patient is given a bedside temperature chart with these details recorded, *only* if there is any rise in either of the three readings above an arbitrary maximum normal viz. 98°F. (36.7°C) (axillary recording), 90 per minute, and 20 per minute, respectively. Moreover, once an abnormal reading has been obtained, it is a 4-hourly chart only which is utilized, thus avoiding any further wasteful repetition of the 12-hourly recordings on to a separate sheet. The twice daily recordings are, of course, still recorded in the ward book. The latter, incidentally, is a proper foolscap size, firm-backed book; not any odd notebook.

Our motives in starting this routine were twofold. Firstly, with the nation-wide shortage of trained nurses this was a practical step to save the time of the available staff for more important tasks. Secondly, it helps considerably to reduce the enormous amount of sheets of paper which nowadays masquerade under the heading of clinical notes, and which, in the case of an oft-admitted patient, constitute a formidable barrier to anyone trying to obtain a quick résumé of the patient's past history. It is seldom our practice now to include a T.P.R. chart in the patient's notes once he is discharged.

This system requires for its success a complete understanding of the method by the nursing staff, and full post-operative clinical notes by the house surgeon We have found this routine to work satisfactorily in a surgical ward, but I doubt if it would apply equally well in a medical unit.—I am, etc.,

F. T. CROSSLING.

Stobhill General Hospital,
Glasgow.

Periarthritis of the Shoulder

SIR,—Mr. G. C. Lloyd-Roberts and Mr. P. R. French are to be congratulated on their informative paper on capsulitis of the shoulder (*Journal*, June 20, p. 1569).

Considerable doubt had been thrown on our early report of success[1] by Murnaghan and McIntosh's article[2]; hence this confirmation is welcome. What their paper does not bring out clearly is the essential difference between those capsular lesions requiring manipulation for the restoration of range and those requiring hydrocortisone. In monarticular rheumatoid cases, injections of hydrocortisone into the joint suffice of themselves to abate inflamation and initiate restoration of range. All other treatment is superfluous. By contrast, after the first six months of a freezing shoulder, manipulation is the treatment of choice. It is true that hydrocortisone is introduced into the joint first[3], but not as a curative measure—it has no effect on the lesion itself—but to avert the post-manipulative reaction at the capsule that caused as much difficulty in pre-steroid days.—I am, etc.,

JAMES CYRIAX.

London, W.1.

REFERENCES

1 Cyriax, J., and Troisier, O., Brit. med. J., 1953, 2, 966.
2 Murnaghan, G. F., and McIntosh, D., Lancet, 1955, 2, 798.
3 Cyriax, J., The Shoulder, 1957, p. 33, Cassell: London.

Posture

SIR,—The interesting article on posture by Sir Russell Brain (*Journal*, June 13, p. 1489) stresses how little is known of the underlying mechanisms in health, let alone in disease. A patient recently seen at the David Lewis Epileptic Colony appeared to show an unusual example of such a disorder.

He was aged 41 and for a number of years had been subject to frequent "falling attacks." These might be precipitated by a number of stimuli. A sudden noise used to be adequate but apparently not recently. Almost all his falls would now occur if he was suddenly confronted by a person who he did not expect to see. Certain people were obviously a more potent stimulus than others. The patient only admitted to one other precipitating factor. He prided himself on being a bit of a writer and found that when he lit on a "good turn of phrase" he might fall to the floor. On very rare occasions the patient might be able to ward off an attack by an effort of will when it had not proceeded further than a forward flexion of the trunk.

He denied suffering from attacks of any other kind, or of ever having lost consciousness. He has never been unduly sleepy. His only other complaint was of shakiness of the hands. There was a history of a trivial head injury at the age of twelve which was followed by a "nervous breakdown." It is at least possible from the description of this illness that it was an encephalitis.

Examination showed a definite lack of facial expression and there was a fine tremor of the head and of the outstretched arms. There was an increased resistance to passive movement in the limbs but motor power was well maintained. Movements were clumsily executed although there was no cerebellar type of incoordination. The reflexes were all within the limits of normal and there were no sensory abnormalities.

Several attacks were witnessed and in these the patient fell heavily to the floor but there did not appear to be an

immediate and generalized loss of power. This might well account for the fact that he rarely, if ever, injured himself.

It would seem possible that the patient's present condition was a post-encephalitic syndrome and the falling attacks appeared to be more closely allied to cataplexy than epilepsy. Electroencephalographic studies have so far shown no evidence of any epileptic activity although an attack has not yet been precipitated during the recording. Encouraging results have been obtained in the treatment of disabling cataplexy with phenacetylurea[1] and as other forms of treatment have been of no avail it would seem justifiable to see if this patient's falls could be controlled with this drug.—I am, etc.,

Wilmslow, Cheshire. NEIL GORDON.

REFERENCES

1 Aird, R. B., Gordon, N. S., and Gregg, H. C., **A.M.A. Arch. Neurol. Psychiat.**, 1953, **70**, 510.

Hazards of Ship Surgeons

SIR,—The comments made by your legal correspondent (*Journal*, April 18, p. 1051) have drawn attention to the medico-legal hazards which beset a ship surgeon.

It will interest your readers to know that the Medical Defence Union is, at the moment, engaged in the defence of two of its members who have become involved in litigation in the U.S.A. In both cases the action has arisen out of the treatment rendered by the members to passengers travelling on board a British ship. One of these actions is being contested in Los Angeles and the other in New York.

Members of the Union who are employed as ship surgeons have hitherto only been required to pay the ordinary basic subscription. The council has now reluctantly decided that members who are so employed shall be required to apply for overseas membership and to pay an indemnity subscription in accordance with the ordinary rates of overseas membership. Members who are known to be employed as ship surgeons have been informed of this decision and an application form for overseas membership will be sent, upon request, to any member who is affected by it.—I am, etc.,

Tavistock House South, Tavistock Sq., London, W.C.1. PHILLIP H. ADDISON. Secretary, Medical Defence Union.

Fatal Capillary Bronchitis

SIR,—The following brief notes may be of interest to your readers.

A 5-months-old male infant was admitted to hospital with acute gastro-enteritis, and we isolated *E. coli* O.26 from his stools. The condition was quite mild, and there was no evidence of dehydration. He was given half-strength Ringer-lactate solution, 6 fl. oz. (170 ml.) four-hourly, till his vomiting stopped. Subsequently he was treated with a five-day course of "tetracycline," during which time his feeds were restored to normal.

Ten days after admission his stools were normal in appearance, he took his feeds eagerly, gained 9 oz. (255 g.) in weight, and seemed to be a very active baby. During the morning round on the eleventh day it was noticed that the child's rectal temperature the night before was recorded as 99.4° F. (37.4° C.). He was therefore examined carefully, but absolutely no physical signs were detected. At 2.30 p.m. the baby, having been fed and changed by the nurse, was placed in his cot, when he seemed perfectly well, but at 2.45 p.m. he was found dead.

This case was reported to the coroner, and the pathologist states that death was due to "capillary bronchitis," which was histologically confirmed. It is very doubtful whether capillary bronchitis as such is a nosological entity, but it is certainly a stage in the march of inflammatory events, leading to lobular collapse and bronchopneumonia. However, asymptomatic capillary bronchitis as the cause of sudden death in an infant must be very rare, embarrassingly disconcerting to doctors, and tragic to the parents.—I am, etc.,

Neasden Hospital, London, N.W.10. K. K. HUSSAIN.

Attempted Suicide

SIR,—Dr. J. V. Mainprise (*Journal*, June 20, p. 1590), seems completely to have missed the point of my letter (*Journal*, May 9, p. 1244). The idea of reporting a disease to the medical officer of health is to give epidemiological information.

I am merely concerned with the lethal action of barbiturates, and with preparations, now existing and yet to be produced, to remove this danger. Even if there is still a necessity to protect the patient from accidental ingestion. Making barbiturates safe may be compared to immunization in an infectious disease and cannot be studied without statistical evidence. Making attempted suicide notifiable would give this evidence and make controlled trials of purported "safe" barbitures possible. What has this to do with medical police?—I am, etc.,

London, S.E.10. CYRIL FOX.

Retinal Detachment

SIR,—Allow me to add some words of remembrance to your annotation entitled "Detachment of Retina" (*Journal*, April 25, p. 1097). You mention the pioneering work by Professor Louis Paufique in corneal grafting as well as in mastering the detachment of the retina.

Apart from the legendary first successful grafting performed by A. Zirm of Olmütz (Moravia) about the turn of the century, it was Anton Elschnig in Prague (starting about 1925) who brought the technique of this operation to such a state of safety as to make it the starting point for world-wide acceptance of grafting of the cornea.

As for the detachment operation, I was fortunate to be present at the Heidelberg meeting of 1928 when J. Gonin announced his operation under the humble title "Wie bringt man Netzhautrisse zum Verschluss?" (How does one bring about the closure of retinal rents?) When he explained the way how he ascertained the point of attack with the Paquelin cautery opposite the retinal tear he proudly exclaimed in his soft Swiss dialect "Ein Szuss-ein Treffer" (every shot a hit).

After the lecture I asked Marc Amsler, then Gonin's assistant, why they did not use diathermy or electrocautery in preference to the Paquelin, he answered: "That's quite simple, we have only the Paquelin and nothing else." I remember also Gonin's reply to reproaches by his French colleagues why he had chosen Heidelberg for announcing his operation in preference to a French assembly. He said: "You are such blockheads, you would never have believed me anyhow."

In view of Professor Gayet's dictum: "To wish to treat a retinal detachment one must be either a charlatan or a fool," (in 1929!) one can understand Gonin's answer to his French colleagues.

I submit that Gonin and Elschnig are the real

pioneers in the greatest advances in ophthalmic surgery during the first half of the present century.—I am, etc.,

H. GOLDBERG.

Melbourne, Australia.

Surplus Beds and Nurses

SIR,—The *Journal* of January 31, recently arrived here, contains a lengthy letter (at p. 300) from Mr. H. S. Shucksmith on "Surplus Beds and Nurses." It would seem to me that the letter shows or proves little, apart from the fact that some surgical cases do well and can go home early. A return home as soon as possible is surely the aim with all surgical cases, but it is not as easy as Mr. Shucksmith suggests, and the following limitations must be recognized:

(1) *Home Conditions.*—The doctor in Mr. Shucksmith's cases, whom it is noted can afford a sports car, is obviously going to be better cared for at home than a patient returning to the slums of Leeds or any other city.

(2) *Physical Capacity and More Importantly Mental Attitude.*—I had an acutely inflamed appendix out as a night emergency at the Middlesex Hospital (? one of the £40 per week per bed hospitals mentioned by Mr. Shucksmith). I got up late the next morning, left hospital on the third post-operative day, and hooked in a rugby match 12 days later, so I know that early ambulation works if the patient will co-operate; but it must be accepted as a fact that many patients with a low pain threshold cannot be speeded up and will demand much attention throughout their stay in hospital. Transferring such types to a ward with less staff will make them no less demanding.

In any case, given a reasonable home and an adequate psyche, any patient following an inguinal hernia operation can and should go home at least as early as the two cases detailed by Mr. Shucksmith; and I cannot see that he has made any case for changing the present lay-out of general hospitals.—I am, etc.,

J. M FOREMAN.

Medical Department,
Fiji

Marriage Guidance Council

SIR,—May I through you clear up a confusion in the minds of many general practitioners between the work of the Marriage Guidance Council (M.G.C.) and that of the Family Planning Association (F.P.A.)? The M.G.C. has nothing to do with birth control and anyone wanting advice or instruction in this should be sent to the local branch of the F.P.A.

The work of the M.G.C. is twofold. Firstly, it aims at helping those with marital difficulties. Clients are seen by a single counsellor who has been very carefully selected and has undergone a considerable course of training; they are helpful to work out their own problems and this often necessitates many interviews, if possible with both partners in the marriage. Secondly, the M.G.C. does a great deal of education work in senior forms in schools, in boys and girls clubs, and similar groups; it holds discussion groups for young couples about to get married, and also sends speakers to more senior discussion groups among teachers, clergymen, etc. At the present time there is a lot of education on sex in school, but very little on the problems of married life such as respect for the other's personality, the right attitude to household finance, to the responsibilities of parenthood, etc. It is with the Art not the Act of Marriage that the M.G.C. is concerned —I am, etc.,

F. F. HELLIER,
Chairman, The Leeds Marriage Guidance Council.

Leeds, 2.

Hazards of the Luteal Phase

SIR,—Drs. I. L. and P. C. B. MacKinnon and Dr. A. D. Thomson are to be highly congratulated on their excellent contribution on the "Lethal Hazards of the Luteal Phase of the Menstrual Cycle" (*Journal*, April 18, p. 1015).

Women with chronic pelvic infection from whatever source very often develop persistent luteal bodies or cysts in one or both ovaries. They complain of general ill-health, loss of libido, marked dysmenorrhoea, and often dyspareunia. Their menses become irregular, with increase in loss and duration and subsequent decrease in loss and eventually amenorrhoea, like cases of Stein-Leventhal syndrome, where luteal tissue is a feature of the many small sub-capsular ovarian cysts.

Endocrine therapy or physiotherapy for these cases is useless. "Pelvic toilette" or a meticulous pelvic plastic operation with ovarian repair (not wedge resection), salpingolysis, salpingostomy if necessary, and sometimes suspension of a fixed retroverted uterus, gives excellent results in these domestically unhappy women, who are so often considered to be neurotics. I have no doubt some are driven to suicidal acts. If any of the luteal tissue or luteal cyst wall is not removed with meticulous care the symptoms persist. Will gynaecologists in general not give these sad cases more surgical attention? Physiotherapy in the form of diathermy, and the efforts of psychiatrists are indeed useless.—I am, etc.,

D. P. de VILLIERS.

Rondebosch,
South Africa.

Printing the "B.M.J."

SIR,—Allow me to congratulate you and your staff on continuing the publication of the **Journal.** The **B.M.J.** is not only an organ of mtdical record but also a medical newspaper. Differences about the National Health Service have nothing to do with disputes in the printing and allied trades. There is no relationship whatsoever. Moreover this is a free country where people can do and say what they like within the limitations of the law. For this very reason many foreigners have found a home here over the centuries, and some of them have contributed no little in brains and skill to the national prosperity.—I am, etc.,

Exeter G. F. B. PAGE.

SIR,—For the second time in a few weeks I am sorry I have to complain for not having received an issue of the **British Medical Journal,** namely No. 5138 of June 27. Of course the point is not the feeling of being materially robbed, but the strain of not seeing in my post-box this weekly message from a country which I love, having spent there a beautiful time of my life, and hte lack of immediate availability of an important scientific tool.—I am, etc.,

Rome

LUCIANO ANGELUCCI.

Correction—We regret that in a letter on "disipal" (**Journal,** July 25, p. 99) we wrongly gave benzhexol hydrochloride as its "approved" name. It should have been orphenadrine hydrochloride.

Correction—Amon the authors of the paper "Action of Prednisone in Insulin-resistant Diabetes" (**June 27,** p. 1601) the name of Dr. G. E. Sowton appeared instead of the name of Dr. J. V. Sowton.

Obituary

R. T. HINDE, F.R.C.S.

Mr. R. T. Hinde, consultant ear, nose, and throat surgeon to the Royal Devon and Exeter Hospital, died at the Radcliffe Infirmary, Oxford, on June 27. He was 43 years of age.

Raymond Thomas Hinde was educated at the Haberdashers' School and at Guy's Hospital, qualifying in 1940. After filling two house appointments at Guy's, he found himself unable to enter the Royal Navy as a medical officer, and so volunteered for the Indian Medical Service, from which, while in India, he transferred to the Royal Indian Navy. Invalided from the service in 1944, he returned to Guy's as registrar to the ear, nose, and throat department and demonstrator in anatomy. Later he became registrar in the same specialty at the Radcliffe Infirmary, Oxford. In 1949 he was admitted F.R.C.S.

W. I. W. writes: In 1949 Raymond Hinde took the most successful single step of his life in marrying Dr. Jean Mary Briscoe. Soon after this he became consultant surgeon at Exeter, where he and Jean quickly won the confidence and affection of all who met them. Cheerful and wholly free from personal ambition as he was, few but his immediate colleagues will remember the excellence of Raymond Hinde's surgery, of which he himself was the only critic, and a severe one, and few but his medical colleagues were able to realize his skill as a physician. His patients will remember the courteous sympathy he gave them when they were ill or merely anxious. The rest of us will remember his precise manner of speech, his neat and rather elegant appearance, which made people say, "Did Hinde really play rugger for Guy's?" We shall remember his unfailing good manners, his divotion to the music of Bach, who for him dwarfed all other composers, and to sailing (his best holidays were spent on his boat with Jean or sailing in the Fastnet race). Especially we shall remember his enjoyment of good conversation. Entirely without mannerisms himself, Raymond was fascinated by the small pomposities of everyday speech, which he would collect lovingly, as a naturalist would some rare specimen. On committees, which he detested, he spoke seldom and briefly, but when he did it was in plain English so emphatic and lucid as to seem suddenly a different language from the committee jargon that had preceded it.

Like most great humorists he was a serious man, keenly aware of the reality beneath the absurd. His reverence was confined to the mysteries of the Christian religion; to him these remained true mysteries, not to be illuminated by labels. The last few months of his life must have been filled with fear for a man as clear-sighted as he was, but he seldom allowed his friends a glimpse of it through the screen of hilarity built round it. It is remarkable that a man so unfanatical, so averse to organizing other people, so uninterested in improving them, should have the power of enchanting them as Raymond did, and should leave them, despite the bitterness of this loss, lastingly enriched by having known him. The plain truth about him was heard the other day in the x-ray department of his hospital, "He was the nicest one that dealt with us."

J. R. BEAL, M.D., D.P.H.

Dr. J. R. Beal, senior consultant chest physician to the South-east Northumberland area, died at his home at Gosforth, Newcastle upon Tyne, on July 2, after a protracted and painful illness which he bore with fortitude. He was 55 years of age.

John Reginald Beal was educated at Manchester Grammar School and at the Victoria University of Manchester, where he graduated M.B., Ch.B. in 1925. Two years later he proceeded to the M.D., and in 1929 he took the Manchester D.P.H. After being house-physician and resident clinical pathologist at Manchester Royal Infirmary, he took up a resident post at the Brompton Hospital and, later, at the Evelina Hospital, London.

C. V. writes: Dr. John R. Beal was appointed assistant tuberculosis officer to the city of Manchester in 1929, when the clinic was housed in Hardman Street. Enthusiastic in his hobbies as a photographer and numismatist, as well as in his chosen profession, he was early recognized to be a shrewd clinical judge, and after his appointment to the Manchester post he showed also that he had that rare combination of being also an able administrator. His appointment as tuberculosis officer to Sunderland in 1932 gave him the opportunity he sought to exercise these twin qualities to the full. During the second world war he was in the R.A.M.C. and was ultimately raised to the rank of lieutenant-colonel and placed in charge of the Army tuberculosis centre, Poona, where he remained until the end of the war. In view of his unique experience he was requested to contribute a section covering tuberculosis to the official history of the British Army in India.

On returning to civilian life he applied for and was appointed to the post of senior tuberculosis officer to the county of Northumberland in 1946. On the inception of the National Health Service in 1948, not only was he graded as a consultant in tuberculosis, but also, because of his experiences in India, as a consultant in smallpox. Under his guidance the tuberculosis service of the county was improved beyond recognition, and new clinics were established on a sound practical basis in the more populous southern areas of the district. Already well-known for his frank attitude, particularly towards insincerity, whether clinical or administrative, he continued to be courageous enough to do and say what he thought was correct. Disappointed in many respects with the lack of encouragement for further developments, he nevertheless pursued his aim of seeking to improve the facilities that could be offered to the patient.

To many, his slow, deliberate method of speech was misleading, and they failed to recognize his quick, critical perception of the details of a situation. Throughout his dealings he always had a well-developed, dry sense of humour, which was evident even during the last weeks of his illness, when he was in persistent pain. His clinical interest in patients never waned, and even during those last days he was always pleased to discuss the latest news of patients who had been under his care. He leaves a widow and a son, to whom our sincere sympathy is extended.

W. E. FITZGERALD, M.C., M.B., Ch.B., D.P.H.

Dr. W. E. FitzGerald, formerly medical officer of health for Southport, died at Southport Infirmary on June 30, aged 70 years.

William Earnest FitzGerald graduated M.B., Ch.B. at Edinburgh University in 1911. After resident appointments and a period as medical officer at a hospital in Rouen, he became a temporary medical officer at school clinics in Bootle and Southport. During the first world war he served as a captain in the R.A.M.C. In 1917 he was awarded the Military Cross for attending to wounded and gassed men during a heavy gas-shell bombardment and, in the words of the official citation, for "having displayed magnificent pluck and devotion to duty." In 1920 he was appointed deputy medical officer of health for Southport, holding the post until 1934, when he succeeded Dr. G. C. Barnes in the senior appointment. In addition to his medical qualifications Dr. FitzGerald was a barrister-at-law of Lincoln's Inn. He conducted a campaign for clean food in the borough, a campaign which became widely known as "the Southport experiment" and which was copied by other authorities. When he retired, for health reasons, in 1952, the town council presented him with an

illuminated address, a happening rare in the case of a retiring official. He leaves a widow.

G. N. M. W. writes: Dr. W. E. FitzGerald served as a member of the Southport and District hospital management committee from 1948 until June this year, and took a leading part in the development of the health services in the town. He will be particularly remembered for his great love for children and for his kindness to those in any sort of trouble. He foresaw many years ago that it might be possible to eradicate tuberculosis from this country, and remained keenly interested in anti-tuberculosis work after his retirement in 1952.

EDWARD WIGHT, M.R.C.S., L.R.C.P.

Dr. Edward Wight, who was in general practice at Brighton for many years, died at Hove Hospital on February 15. He was 79 years of age.

Edward Wight was born on June 27, 1879. From Cambridge he went on to St. Thomas's Hospital, qualifying in 1906. After resident appointments at the Royal Free Hospital, he settled in practice at Brighton, later becoming honorary anaesthetist to the Brighton, Hove, and Preston Dental Hospital.

R. E. writes: If ever there was a general practitioner who merited the full appreciation of his fellows it was Dr. Edward Wight. He became the junior partner in his father-in-law's practice in Hove and Brighton, and after a few years was one of the best known men in practice in Brighton. In the ordinary sense of the word he was never a public figure, but his relationship with his many patients, in all walks of life, was a unique one. His patients loved him very much and he never spared himself in their service. Twenty years have elapsed since he was in practice (heart trouble enforced his retirement), and no doubt there are a few doctors practising to-day who knew him and appreciated him to the full. He practised under the old régime, and one wonders whether under the stress and change of modern conditions the qualities that he showed could be repeated. In the later years of his retirement he was very much an invalid, having two severe coronary thrombosis and ultimately a very painful illness. As one who was a personal friend and a fellow practitioner I hope that his death may be fittingly recorded and due honour paid to his memory.

T. F. J. RYAN, M.Ch.

Dr. T. F. J. Ryan, who had been in general practice at Langold, near Worksop, Nottinghamshire, for the past thirty years, died very suddenly on May 30.

Timothy Ferigle Joseph Ryan was born in Dublin on August 14, 1903, and was educated at the O'Connell Schools and the National University of Ireland, graduating M.B., Ch.B. in 1927. At school he gained many prizes and exhibitions and at college he took first place at almost all his examinations, winning the Bellingham gold medal. He was a demonstrator in anatomy, and after graduation held the posts of house-surgeon and house-physician at St. Vincent's Hospital, where he had trained. After a trip to Australia in the S. S. *Wangaretta*, a cadet training ship in which he served as ship surgeon, he returned to England, and in 1928 started as an assistant in Langold. In 1930 two practices were amalgamated and he became a partner and remained there until his death.

W. C. G. P. writes: Always interested in surgery, Timothy Ryan was elected to the staff of the Victoria Hospital, Worksop, and soon proved that he was to be a most important member of the honorary surgical staff. He put in much hard work, and in 1938 took the M.Ch. at his old university. His sound knowledge of medicine enabled him to undertake many and varied operations, and during the war years he carried the brunt of the surgical work of the hospital on his shoulders. He was also a very active member of the hospital management committee, and did much to develop it from a cottage hospital to its present state. During all this time he also worked hard in an extensive general practice.

His death came as a great shock. A devout Roman Catholic, Timothy Ryan could have made a far wider known name for himself. Instead he elected to use his skill in helping a local community. He leaves a widow, two sons, and three daughters. A packed church for his funeral service, but, even more so, the scores of bowed heads lining the two-mile route to the cemetery left one in no doubt of his patients' love and esteem for their doctor, adviser, and friend.

R. H. WADE M.D., M.R.C.P.

Dr. R. H. Wade, who had practised at Enfield, Middlesex, died at Burnham-on-Crouch, on July 2, aged 58.

Richard Herbert Wade, the son of the late Dr. Herbert Wade, studied medicine at St. Bartholomew's Hospital, graduating M.B., B.S., with honours, in 1922. Three years later he proceeded to the M.D. and took the M.R.C.P. After graduation he held the appointments of house-surgeon at the East London Hospital for Children and house-physician and junior demonstrator in pathology at St. Bartholomew's Hospital. In 1926 he went into general practice at Truro, Cornwall, and was chairman of the Cornwall Division of the British Medical Association in 1931–2. He left truro in 1933 to become a partner in a practice at Enfield, where he remained until 1952, when he retired. Over much of the same period he was also a clinical assistant at the National Hospital for Diseases of the Heart. He leaves a widow.

B. M. T. writes: Dr. R. H. Wade passed away at Burnham-on-Crouch while preparing to take his boat on the river for the remainder of the summer. He had been far from well for many weeks, but was happy in the thought that he could again make these preparations. He had known Burnham for fifty years or more, and six years ago retired there when his health was such that it was unwise for him to continue in general practice. It was my good fortune to work with him in partnership for twenty years. He was a quiet, modest man, outstandingly brilliant in his work; he always gave himself unsparingly to his patients. His other interests were many and varied. In the summer as much time as possible was spent on his yacht. At other times reading, music, the study and collection of old charts, maps, and prints, and also the construction of complicated wireless equipment occupied the little leisure time available. Whatever he did was done with a thoroughness which was quite phenomenal. Many people including myself have a lot to thank him for.

MARTHA F. ARMITAGE, M.D.

Dr. Martha Armitage, formerly in practice at Reading, died on July 2 at Southborough, Tunbridge Wells, aged 93.

Martha Florence Armitage was born on October 19, 1865, and studied medicine at the London School of Medicine for Women. Taking the Scottish triple qualification in 1896, she obtained the Brussels M.D. and the L.M. at the Rotunda Hospital, Dublin, in the same year. In Reading, where she practised, she held many appointments, being medical officer to the women students at University College, where she was also the first lecturer in hygiene. During the first world war she was a Government examiner of women recruits for the Services and munition factories, and commandant of the Berkshire branch of the British Red Cross. For some years she was a medical officer under the Elementary Schoolteachers Superannuation Act, medical inspector of the Berkshire county girls' secondary schools, and medical officer to the Reading Dispensary and the Y.W.C.A. In addition to her efforts on behalf of working women and girls, she was instrumental in bringing to the notice of the authorities the high rate of infant mortality in Reading and did much by her pioneer work to help in establishing schools for mothers and antenatal and

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post-natal clinics. She was elected an honorary associate of University College, Reading, in 1914. Owing to ill health she retired from practice in 1923. In the years since then her kindness to those in need and her generosity became proverbial, and many young people owe their start in life to her good offices. She retained to the last her great interest in world affairs.

C. S. GIDEON, M.D.

Dr. Cyril Gideon, who was in general practice in Jamaica for many years, died at Kingston, on that island, on June 20 aged 73.

Cyril Searle Gideon was born at Port Antonio, the son of the late Hon. David Sampson Gideon, C.M.G., *Custos* of Portland. He was educated at Bedford Grammar School, England, and at Toronto University, where he graduated M.B. in 1908. He returned to England and in 1910 obtained his M.R.C.S., L.R.C.P. Returning to Jamaica, he first entered the Government Medical Service in 1910 as a supernumerary medical officer at the Kingston Public Hospital. Then, after a short temporary appointment at the lunatic asylum, he was appointed district medical officer for Gayle. Two years later he was granted a commission as a justice of the peace for the parish of St. Mary. When the first world war broke out in 1914 he came to England and joined the R.A.M.C., being attached to the King's Shropshire Light Infantry. Later he was given command of an ambulance train, and when he eventually returned to England he served in various capacities before joining the staff of the Ministry of Pensions. In 1928 he proceeded to the Toronto M.D., having in the meantime settled down in private practice in Jamaica. During these years he was an active member of the Jamaica Branch of the British Medical Association. In 1945 he re-entered the Government Medical Service as district medical officer of Stony Hill, a post from which he had recently retired. Since 1910 Dr. Gideon had served the medical department in a variety of ways. He was quarantine officer for eleven years, medical officer to the local forces for sixteen years, and during the second world war he was medical officer in charge of Gibraltar internment camp at Mona. In 1929 he married Melaine Freida, daughter of the late Ernest Beschle, of Switzerland. To his widow, his close relatives, and, indeed, to all his patients, we offer our sympathy.—G. P. F. A.

JOHN REID, M.D., F.R.F.P.S., D.P.H.

C. C. writes: Your obituary in the issue of July 4 (p. 23), paid fitting tribute to this kindly and modest man. May I, as one who had the privilege of his friendship, add this passing tribute? John Reid was a great superintendent in those days when a medical superintendent made or unmade his hospital, and he was, as many of these men were, a great physician. It is a truism to say that he lived for his work. He did, and he passed his life in its service and in the service of those who came under his care. His innate modesty masked a profundity of clinical knowledge, and it was perhaps only those who knew him intimately who knew how wide that knowledge was. He hated humbug and cant, self-seeking, and personal aggrandisement, and often deplored to his friends the foolishness of those who attempted to deceive by these methods. But he never failed to listen to what others had to say, and he was at all times courteous: he had no enemies. His home life was simple and happy and the family circle devoted. His passing leaves a great gap in my life and a great sympathy for his widow and for his son who made the home the kindly and hospitable place it was.

R. SESSIONS HODGE, M.R.C.S., L.R.C.P., D.P.M.

Dr. José Eduardo Fernandes writes from São Paulo, Brazil: It was with great sorrow that I just learned through the *Journal* of February 14 (p. 443) of Dr. R. Sessions Hodge's death. I have always kept a very pleasant recollection of my association with him in my days at the Burden Neurological Institute as a British Council scholar. He was then a delightful companion, full of humour and appreciation of everybody's remarks. As a foreigner, or a friendly alien as I was technically classified in war-time Britain, it was a cheerful experience for me to watch his imperturbable gentlemanliness amidst the rather unorthodox conversations of our round-table during lunch at the Institute. In fact, the most vivid memory I keep of Hodge is that of a warm and friendly colleague, the very image to me of the British gentleman-doctor. I felt I ought to send to you this belated tribute to show that such a fine man as Sessions Hodge will be remembered also in distant lands.

DEATHS

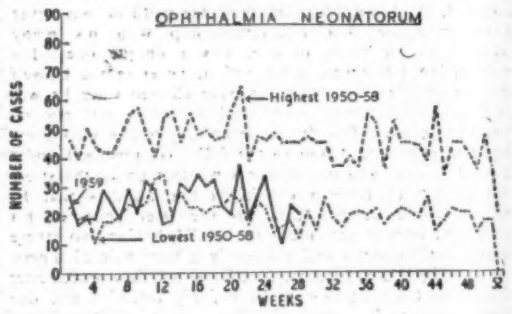
Pelle.—On May 26, 1959, at 134, Cooden Drive, Bexhill-on-Sea, Sussex, Harry Diamond Pelle, M.R.C.S., L.R.C.P., Lieutenant-Colonel, I.M.S., retired, aged 86.

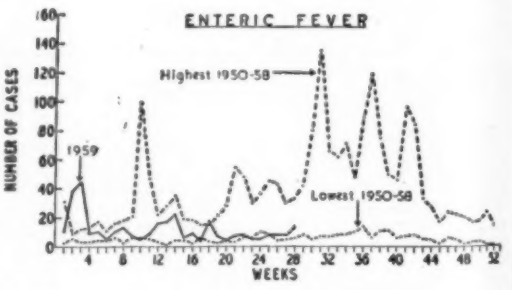
Pickett.—On May 29, 1959, at his home, "Fairfield," Newton Solney, Burton-on-Trent, Staffs, Francis Lionel Pickett, M.B., Ch.B., aged 66.

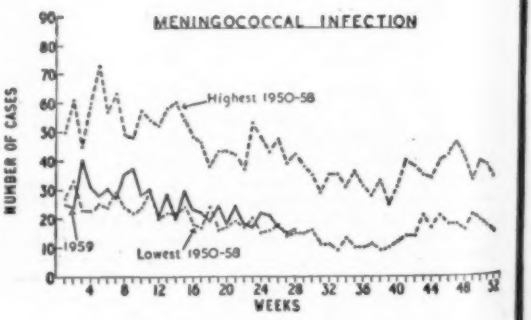
Proctor.—On May 26, 1959, at Ingleby Cross, Northallerton, Yorkshire, Samuel Percy Palmer Proctor, M.B., Ch.B.

Sullivan.—On June 9, 1959, at 15, Neville Courte, St. John's Wood, London, N.W., Benjamin Sullivan, M.R.C.S., L.R.C.P., F.F.A.R.C.S., aged 43.

Vital Statistics







Any Questions?

Ocular Symptoms after Radioactive Iodine

Q.—Is lacrimation and swelling of the upper eyelids, giving a hooded appearance, common after radioactive iodine treatment for thyrotoxicosis, and what can be done to alleviate it?

A.—Lacrimation and circumocular oedema, the latter often masking exophthalmos, may arise after treatment of thyrotoxicosis whether by subtotal thyroidectomy, antithyroid drugs, or radioactive iodine. It is due to rapid lowering of the level of the blood thyroxine which causes an increased secretion of an exophthalmos-producing factor by the anterior lobe of the pituitary gland. The condition is sometimes alleviated by the administration of prednisone or prednisolone in doses of 10 mg. four times daily, but in the writer's experience a more effective treatment is deep x-ray therapy to the orbits.[1]

REFERENCE

[1] Jones, A., *Brit. J. Radiol.*, 1951, **24**, 637.

Eustachian Catarrh

Q.—What treatment is recommended for head noises apparently due to catarrh in the Eustachian tube?

A.—Properly applied, the term "Eustachian catarrh" indicates a swelling of the tubal mucous membrane which is nearly always inflammatory in origin, though it may occasionally be allergic. If excessive and prolonged the tube may become impermeable, which will lead to rarefaction of the air in the tympanic cavity and consequent indrawing of the tympanic membrane, and even at times a transudation of sterile serous effuction (serous otitis). In all such cases there will be a conductive deafness and tinnitus which usually dates from an upper respiratory tract infection. It is much commoner in children than adults and usually subsides spontaneously. If it persists after any acute infection has subsided inflation of the Eustachian tube, which is most conveniently carried out by means of the Politzer bag, will often re-establish the patency of the Eustachian tube and effect a cure. In the case of serous effusion it may be necessary to draw this off via the tympanic membrane by a needle syringe or by an incision. This may have to be repeated if permeability of the Eustachian tube cannot be re-established. In children adenoids may need removal, and sometimes only irradiation of the Eustachian tube will reduce the swelling.

A nasal spray or drops designed to shrink swollen mucous membrane may help, and if there is a definite history anti-allergic measures may help. It sometimes happens that the term "Eustachian catarrh" is applied somewhat loosely to any form of deafness or tinnitus, so it is clearly important to ensure, by means of a detailed otological examination, that the cause of the symptoms is a blocked Eustachian tube before establishing a diagnosis of Eustachian catarrh.

Universities and Colleges

UNIVERSITY OF LONDON

Sir Francis Fraser has been reappointed representative of the University on the governing body of Queen Elizabeth College.

Mr S Gnessen has been nominated for appointment as representative of the University on the advisory committee of the New School for Boys, Upper Clapton Road, Hackney

On March 17 the degree of Ph.D. in the Faculty of Medicine was awarded to S C Agarwal (St. Mary's Hospital Medical School) and Ranjit Sen (University College, Ibadan)

The following degrees were awarded by the Senate on March 25:

M.D.—W. Brumfitt, J. Pryse-Davies, H. C. Smellie, N. A. F. Young.
M.S.—Irene M. S. Cade, D. B. Griffiths.

UNIVERSITY OF GLASGOW

The degree of M.D. was conferred on A. J. S. McFadzean, *in absentia*, on March 23.

UNIVERSITY OF WALES

The following candidate at the Welsh National School of Medicine has satisfied the examiners at the examination for the D.P.H.: F. W. Nash.

UNIVERSITY OF BIRMINGHAM

The title of Reader in Experimental Pathology has been conferred on Dr. K. W. W. H. Walton, Senior Lecturer in Experimental Pathology.

The title of Honorary Lecturer in the Department of Medicine has been given to Dr. J. N. M. Chalmers and Dr. M. J. Meynell, consulting clinical pathologists in the United Birmingham Hospitals and University Clinical Lecturers in Pathology; of University Research Fellow to Dr. A. T. Spencer, Endowment Fund Research Fellow, United Birmingham Hospitals, during the tenure of his present award; and of Clinical Tutor in Dental Surgery to Dr. Emily L. Brown and Dr. Doris E. Quinet.

The following appointments are announced: Dr. J. M. Bishop, Lecturer in Medicine, to be Senior Lecturer and First Assistant; Dr. P. C. Harris, Lecturer in Medicine, to be Senior Lecturer; and Dr. J. Butler, University Research Fellow in Medicine, to be Lecturer, all from April 1, 1959.

The title of Emeritus Professor has been conferred on Professor J. M. Smellie, who retired from the chair of paediatrics and child health on September 30, 1958.

Professor A. V. Neale has been appointed representative of the University on the court of governors of Bristol University, and Professor A. B. MacGregor has been reappointed representative on the General Dental Council.

The board of governors of the United Birmingham Hospitals has granted honorary status to the following members of staff: Mr. Frank Ashton and Mr. G. T. Watts (honorary senior registrars in surgery); Dr. S. H. Taylor (honorary senior house officer in medicine); Dr. E. M. Little (honorary senior registrar in obstetrics and gynaecology); Drs. H. A. Ellis, D. A. Heath, and D. J. Parish (honorary senior registrars in pathology).

Dr. F. N. Garratt resigned from his appointment as research fellow in social medicine on February 28.

UNIVERSITY OF DUBLIN

SCHOOL OF PHYSIC, TRINITY COLLEGE

At the recent examination held by the University, the following were awarded the Diploma in Gynaecology and Obstetrics:

J. F. Ackary, S. G. Bari, R. Bashir, J. Basu, M. C. Botha, R. Kachan, M. Mphahlele, G. M. J. Pais, U. A. Patel, J. W. Redmond, S. K. Seal, S. Shabbir, Ba Thein, Sein Tin.

ROYAL COLLEGE OF SURGEONS OF ENGLAND

At a meeting of the Council of the College held on March 12, with Sir James Jaterson Ross, President, in the chair, diplomas of Membership were granted to B. H. Ackers and M. D. Sanders, and of Fellowship in the Faculty of Anaesthetists to D. B. Benzon, F. W. Pais, and W. M. Wilkinson. The Macloghlin Scholarship was awarded to Peter Beck, of Wyggeston Boys' School, Leicester

At a meeting of the Council of the College held on May 14 a diploma of Fellowship was granted to G. S. D. Goel.

A diploma in Physical Medicine was granted, jointly with the Royal College of Physicians of London, to R. Fuller, and diplomas in Tropical Medicine and Hygiene to Dr J. F Ainslie and A Hussain.

CONJOINT BOARD IN SCOTLAND

The following candidates, having passed the final examinations, have been granted the diploma of L.R.C.P.Ed., L.R.C.S.Ed., L.R.F.P.&S.Glasg.:

A. S. Affara, G. Antony, M. J. Carter, M. M. Choonara, G. I. Constantinescu, J. Derjanecz, Magdolna Erdohazi, F. S. Freisinger, L. Iffy, I. B. Krinitzky, J. R. Lorenz, R. E. M. Macdonald, Z. Mera, G. Meszaros, N. O. Mohammed, Margaret E. Pawson, H. S. M. Perera, E. J. Pick, I. F. Ponnampalam, R. Randall, Theresa Sebestyen, A. de Toszeghi, Anne M. Urquhart, Apollonia B. Weber, Dragana White.

ROYAL AUSTRALASIAN COLLEGE OF PHYSICIANS

At a meeting of the New Zealand Fellows and Members of the College, held in Dunedin on February 18, the following candidates, who were successful at an examination by the New Zealand board of censors, were admitted by the Vice-President to Membership of the College: R. T. Bush, J. M. Costello, A. E. Dugdale, G. S. McL. Kellaway, A. V. Kurta, J. H. McIntyre, R. B. I. Morrison, R. G. Park, P. J. Scott, I. D. Todd, and J. C. P. Williams.

SUPPLEMENT TO THE
BRITISH MEDICAL JOURNAL
LONDON SATURDAY AUGUST 8 1959

CENTRAL CONSULTANTS AND SPECIALISTS COMMITTEE.

A fear that changes in the hospital medical staffing structure might be agreed in Northern Ireland without adequate consideration of all the implications was expressed in a discussion with a deputation of six doctors from Norther Ireland who attended the meeting of the Central Consultants and Specialists Committee at B.M.A. House on June 25.

A report before the meeting disclosed that the Northern Ireland Hospitals Authority had for some time been pressing the Northern Ireland Branch Council of the B.M.A. to agree to a new hospital medical staffing structure which included a subconsultant career grade. At the request of headquarters, the Branch Council had postponed discussion with the Hospitals Authority on the ground that it would be undesirable to introduce a new staffing structure in advance of the report of the joint working party on hospital stfing in Great Britain. The Authority had then produced an alternative scheme described as one "which would fall within the present structure . . . but which would involve a variation of the common method of applying the grading structure to individual officers."

Also before the meeting was a memorandum drawn up by the Branch Council as a basis for discussion with the Hospitals Authority after prior discussion with the C.C. and S. Committee. After hearing the views of the Northern Ireland represntatives the Committee debated the memorandum. As it contained a number of suggestions which were regarded as being in conflict with Association policy, particularly the proposal to introduce a subconsultant grade, the Committee decided that it could not be accepted in its present form but that a small deputation should proceed to Belfast to discuss the matter with the officers of the Branch Council and the Hospitals Authority.

The Chairman, Mr. H. H. Langston, said that he hoped it would be possible to convince the Northern Ireland Hospitals Authority that it had everything to gain by waiting until the recommendations of the working party were available.

The Committee accepted, after discussion, a draft memorandum of evidence for submission to the Joint Working Party on Hospital Medical Staffing Structure which had been prepared by the Committee's Medical Staffing Subcommittee.

Professor G. I. STRACHAN, outlining the proposals, said that the main points today, as they had been six years ago, were (1) that there should be a review of establishments; and (2) that clinical responsibility should be confined to those of consultant status. It was urged that there should be a ratio of registrars to consultants. The intermediate grade question had been raised but dropped after consideration. The whole scheme was on a long-term basis, no proposals being put forward for the immediate solution of the burning problems which existed, particularly in relation to S.H.M.O.s and senior registrars. He saw no great difference of policy between the Subcommittee's document and the suggested amendments to it which had been prepared by the S.H.M.O.s Group, and he appealed to the latter not to press for points of detail.

Mr. H. H. Langston was nominated for re-election as chairman for the 1959-60 session. Mr. J. R. Nicholson-Lailey and Dr. Rowland Hill were elected deputy-chairmen.

GENERAL MEDICAL SERVICES COMMITTEE

The fruits of five years' work by the Association's Amending Acts Committee in formulating principles for an alternative scheme to the National Health Service met with a mixed reception when its chairman, Dr. A. V. Russell, attended the General Medical Services Committee meeting on June 11 to report progress. A previously circulated document explained that the Amending Acts Committee, in considering the task given to it by Council, had concluded that an "independent British Medical Srvice" implied an alernative scheme to the N.H.S. and not merely a modified form of the present Service. It noted that the G.M.S. Committee, in considering the problem, could see no workable alternative save a return to private practice, and the Amending Acts Committee agreed with that view. Its proposals were aimed at bringing about a system of snbsidized private practice and minimal governmental interference—a system which had proved to be outstandingly successful in Australia, where it had greatly enhanced the prosperity and standing of the medical practitioners in that country.

After a lengthy debate, in the course of which Dr. Russell answered many questions, it was decided, on the motion of Dr. A. M. Maiden, that the details of the proposal should not be published for the time bing. The motion also stated that, "while not accepting all the principles enumerated . . they should be noted for reference to whatever committee the Council might decide to establish for the purpose of submitting evidence to the Porritt Committee which is at present investigating all aspects of the health service."

After a discussion on a two-way information service and the Scottish pilot survey based on "random sampling" as methods of obtaining the views of general practitioners, it was decided to indicate to Council that the Committee was impressed with the Scotish method but would like to give further consideration to the two-way scheme devised by the Organization Committee.

The Chairman said that the final report of the Hinchliffe Committee on the Cost of Prescribing contained few new proposals of a revolutionary type. The proposal to publish a new prescribing journal had been referred to the teaching authorities and to medical schools. The proposal to tighten up the procedure for investigating complaints of overprescribing was in line with the evidence given by the G.M.S. Committee.

After discussion of other items in the report it was agreed to recommend to Council that a working party should be appointed to have further discussions with the Ministry on the Hinchliffe Committee's recommendations.